

RECORDS CODE SHEET
SND 4335 (Rev. 1/65)

NAVAL AVIATION SAFETY CENTER

GENERAL (Card No. 1)

SUPPLEMENTARY (Card No. 2)

Bureau Number	149802	16-21	Weather		16-21
Reporting Custodian	E03	22-24	Kind of Flight	1R2	22-24
Type Duty	4	25	Relative Wind - Direction		25
Major Command	3	26	Relative Wind - Velocity		26
Aircraft Damage	A	27	Special Attention		27
Aircraft Injury	A	28	Clearance	1	28
Time of Day	2	29	Maneuver prior to Occurrence		29
Carrier Hull Number		30	Number of other Aircraft		30
First Accident type	C2	31-32	Primary Causal Factor	Y3	31-32
First Accident phase	33	33-35	Altitude of Occurrence or Emergency		33-35
Second Accident type	B3	36-37			
Second Accident phase	33	38-40	Environmental Factors	S	38-40
Type of Operation	3	41-42			
Contributing Cause Factors	312	43-47	Non-Navy Injury ("R")		42
Pilot Factor, First	Y3	48-49	Number of "A" or "U" Injury	58	43-44
Pilot Factor, Second	XG03	50-51	Number of "B" Injury	11	46-47
Pilot Factor, Third	XT07	52-53	Number of "C" Injury		48-49
First other Personnel Factor	A7	54-55	Number of "D" Injury		50-51
Second other Personnel Factor	A3A	56-57	Number of "E" Injury		52-53
Primary Major Material Factor	R	58	Number of "F" Injury	2	54-55
Secondary Major Material Factor		59	Number of "G" Injury		56-57
Design		60	Location	134CHINA	62-68
Facilities		61			
Special Data & Cond.	F3GC	62-65			
Special Data & Cond./Type of Incident	D	66			
Primary Cause	1	67			
1st Posit. of Pri. Causal Factor	Y	68			
1st Possible Cause & Causal Factor		69-71			
2nd Possible Cause & Causal Factor		72-74			
No Personnel Card ("R")		80			

ACCIDENT DAMAGE	A	Don't Count	Emergency	X	Other Aircraft
ACCIDENT INJURY	A	1. D.	5	0	2
FISCAL YEAR	6	NO.	YR	MO	DAY
					TYP
					SEQ
					Model
					Model Code
					43

PERSONNEL STATISTICS
(Card No. 3)

File Number	Name	Rank/Rate	Br Service	Age	Yrs Experience	Status	Position	Inj to Ind	Abandon A/C	Pilot Factor Involved	Trainer Utilization	Instr. Card	Total Time All Models	All Models 3 Months	All Series This Model	All Ser Mod 3 Months	CV Landings	Instrument Hours	Wife Hours	Total Time Jet or Helo	
(b) (6)	(b) (6)	P5	6	7	2	A	1	B	1	1	1	2	1	2	2	7	2	2	5	3	4
(b) (6)	(b) (6)	C4	5	4	5	D	2	B	1	3	3	4	1	3	9	9			2	4	

18M: PERSONNEL CODED ON REVERSE SIDE

CODED *[initials]* REVIEWED *[initials]* LOGGED *[initials]* PUNCHED *[initials]* VERIFIED *[initials]*

16 DEC 1965

12 MAY 1966

CODE SHEET REVIEWED BY CLASS DESK ANALYST *[initials]* (Date) *[initials]*

OTHER INJURED PERSONNEL

(Modified Card No. 3)

C.C. 79 - 80	FILE NUMBER						NAME						Rank or Rate	DR Service	Age	Yrs. Exper.	Status	Position	Inj. to Ind.	Random A/C					
	16	17	18	19	20	21	22	23	24	25	26	27									28	29	30	31	32
05	(b) (6)												C5	—	X3B1										
06													C5	—	I3B1										
07	(b) (6)	BLEXRUDE										G	D5	—	I3A1										
08		GERRY J L										E	5	—	I3A1										
09	(b) (6)												F5	—	Q4B1										
10													AG5	—	Q4B1										
11													A	B1	—	Q4B1									
12													L	G5	—	Q4B1									
13													F5	—	Q4F1										
14													55	—	Q4B1										
15													G5	—	Q4F1										
16													H	G5	—	Q4B1									
17													G5	—	Q4B1										
18	(b) (6)	BRAZEN H										J	F5	—	Q4A1										
19		CLANCY J										A	F5	—	Q4A1										
19		RULDEEN P										E	55	—	Q4A1										
19		POVEY J T										E	55	—	Q4A1										
19		RUNKEL R										L	F5	—	Q4A1										
19		SHOUP W K										F5	—	Q4A1											
19		WAFFORD R L										F5	—	Q4A1											

IBM: Place an "X" overpunch in CC80 if these cards are coded.

OTHER INJURED PERSONNEL
(Modified Card No. 3)

C.C. 79 - 80	FILE NUMBER						NAME										Rank or Rate	BR Service	Age	Yrs. Exper.	Status	Position	Inj. to Ind.	Abandon A/C								
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	35	37	40	42	45	47	49								
05	(b) (6)						W	A	L	L	A	C	E	R	F	4	5	-	Q	4	A	1										
06							B	R	A	C	K	E	N	D	D	G	5	-	Q	4	A	1										
07							L	A	P	O	R	T	E	D	J	D	5	-	Q	4	A	1										
08							A	R	N	O	L	D	M		F	5	-	Q	4	A	1											
09							B	U	R	N	E	L	L	E	J	F	5	-	Q	4	A	1										
10							B	U	R	T	O	N	C	W	F	5	-	Q	4	A	1											
11							C	R	O	W	T	N		G	5	-	Q	4	A	1												
12							D	A	V	I	S	R	L	F	5	-	Q	4	A	1												
13							D	E	G	R	O	O	T	M	F	5	-	Q	4	A	1											
14							E	F	A	W	R	T		F	1	-	Q	4	A	1												
15							F	A	N	K	H	A	U	S	E	R	F	5	-	Q	4	A	1									
16							F	O	R	D	J	A		F	5	-	Q	4	A	1												
17							G	I	V	E	N	F	A		G	5	-	Q	4	A	1											
18							H	A	M	B	L	E	T	O	N	G	5	-	Q	4	A	1										
19							H	A	N	S	E	N	D		D	F	5	-	Q	4	A	1										
19							H	A	R	T	S	O	C	K	L	F	5	-	Q	4	A	1										
19							H	E	I	N	Z	E	K		K	C	5	-	Q	4	A	1										
19							J	O	H	N	S	O	N	G	V	D	5	-	Q	4	A	1										
19							J	O	S	S	E	N	D	A	L	F	5	-	Q	4	A	1										
19							L	A	K	E	J	W		E	5	-	Q	4	A	1												

IBM: Place an
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cards are coded.

OTHER INJURED PERSONNEL
(Modified Card No. 3)

C.C. 79 - 80	FILE NUMBER										NAME										Rank or Rate	DR Service	Age	Yrs. Exper.	Status	Position	Inj. to Ind.	Abandon A/C				
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	35	37	40									42	45	47	49
05	(b) (6)										LEAF J B										G5	—	Q4A1									
06											MARTIN D R										G5	—	Q4A1									
07											MASSEY J										D5	—	Q4A1									
08											MCCARTNEY										F5	—	Q4A1									
09											MESA R										H5	—	Q4A1									
10											WILLIS R A										F5	—	Q4A1									
11											MICHEL J S										G5	—	Q4A1									
12											MONAHAN E J										F5	—	Q4A1									
13											MYERS G G										F5	—	Q4A1									
14											NEY D C										F5	—	Q4A1									
15											OKANE J B										F5	—	Q4A1									
16											PFEFFERLE										G5	—	Q4A1									
17											ROLAND J P										F5	—	Q4A1									
18											SANDERS J T										F5	—	Q4A1									
19											SMITH R										E5	—	Q4A1									
19											THOMPSON G E										F5	—	Q4A1									
19											VOTAVA J J										F5	—	Q4A1									
19											WUEST D R										F5	—	Q4A1									
19											POWELL R L										F5	—	Q4A1									
19											GRIMES G W										F1	—	Q4A1									

IBM: Place an
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in CC80 if these
cards are coded.

OTHER INJURED PERSONNEL
(Modified Card No. 3)

[illegible]

IBM: Place an "X" overpunch in CC80 if these cards are coded.

MAINTENANCE AND MATERIAL CODE SHEET (Narrative brief on reverse)

5ND 4621 (Rev. 10/64)

MAINTENANCE AND MATERIAL CARD NUMBER 33										CARD COL.
PRIMARY INVOLVED MATERIAL COMPONENT										16-21
SECONDARY INVOLVED MATERIAL COMPONENT										24-29
PROBABLE INVOLVED MATERIAL COMPONENT										32-37
SPECIAL DATA AND CONDITIONS										40-42
SPECIAL DATA AND CONDITIONS										44-46
SPECIAL DATA AND CONDITIONS										48-50
SPECIAL DATA AND CONDITIONS										52-54
SPECIAL DATA AND CONDITIONS										56-58
SPECIAL DATA AND CONDITIONS										61-63
FIRST MAINT FLT./SPEC COMPONENT										65-68
CARD NUMBER										79-80

MAINTENANCE AND MATERIAL CARD NUMBER 34										CARD COL.
PRIMARY INVOLVED MATERIAL COMPONENT:										16-21
MFG P/N										24-29
TOTAL HOURS										32-37
OVERHAUL ACTIVITY										39
NUMBER OF OVERHAULS										41
HOURS SINCE OVERHAUL										43-46
AIRCRAFT TOUR										48
AIRCRAFT FLIGHT HOURS SINCE ACCEPTANCE										50
AIRCRAFT FLIGHT HOURS SINCE LAST INSPECTION										53-55
DAYS SINCE LAST AIRCRAFT INSPECTION										57-58
TYPE LAST AIRCRAFT INSPECTION										61
MONTHS SINCE PAR/OVERHAUL										67-68
CARD NUMBER										79-80

MAINTENANCE AND MATERIAL CARD NUMBER 35										CARD COL.
PROBABLE OR SECONDARY INVOLVED MATERIAL COMPONENT:										16-21
MFG P/N										24-29
TOTAL HOURS										32-37
OVERHAUL ACTIVITY										39
NUMBER OF OVERHAULS										41
HOURS SINCE OVERHAUL										43-46
POWER PLANT MODEL NUMBER										49-56
POWER PLANT SERIAL NUMBER										58-64
DIR										68
CARD NUMBER										79-80

FOR IBM

12-765

16 DEC 1965

VERIFIED

FOR MSM FILING ONLY

REPORT NUMBER

CUSTODIAN

MODEL

BUNO

DATE

IDENT. NUMBER

CAUSE FACTORS

COMPONENT NO. 1

COMPONENT NO. 2

DESIGN

POSSIBLE CAUSE FACTORS

COMPONENT DESIGN

ACCIDENT DAMAGE

ACCIDENT INJURY

SPECIAL ATTN: ("X")

Model Code

11 12 13 14 15

16 17 18 19 20

21 22 23 24 25

26 27 28 29 30

31 32 33 34 35

36 37 38 39 40

41 42 43 44 45

46 47 48 49 50

51 52 53 54 55

56 57 58 59 60

61 62 63 64 65

66 67 68 69 70

71 72 73 74 75

76 77 78 79 80

81 82 83 84 85

86 87 88 89 90

91 92 93 94 95

96 97 98 99 100

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

~~CLASSIFIED~~

X

CARD NO.

79 80

3 6

3 7

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3 9

4 0

4 1

4 2

4 3

4 4

4 5

4 6

4 7

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4 9

5 0

5 1

5 2

5 3

5 4

5 5

5 6

5 7

5 8

5 9

79 80

16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68

U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK, VIRGINIA 23511

NASC/my
Ser 12/526
11 May 1966

SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

From: Commander, U. S. Naval Aviation Safety Center
To: Commanding Officer, Marine Aerial Refueler/Transport Squadron
ONE HUNDRED FIFTY-TWO

Subj: VMGR-152 AAR ser 1-65A concerning KC-130F BuNo 149802 accident
occurring 24 August 1965, pilot (b) (6)

1. The subject report and all endorsements thereon have been reviewed. The Naval Aviation Safety Center concurs with the comments and recommendations of the Aircraft Accident Board as modified by subsequent endorsers.
2. The data obtained in reevaluating the adequacy of the C-130 emergency exits does not warrant a reduction in total passenger capability of the aircraft. As a conservative guideline, Federal Aviation Regulations, Part 25, (Airworthiness Standards; Transport Category Airplanes), were applied to the C-130. With the exception of the shape of the opening (rectangular vs circular), the existing overhead ditching exits would qualify the aircraft to carry passengers to the full extent of the maximum seating capability. As prescribed by these FAR standards, the exits must be readily accessible to the passengers. Flight operations with mixed cargo/passenger loads must be restricted to a maximum of 35 passengers per unobstructed overhead exit. When the normal egress routes are obstructed by cargo tie down arrangements, the passenger capacity should be reduced accordingly. In any event passengers must be adequately briefed on the location of the emergency exits prior to each flight.
3. Follow-on action by cognizant authorities on the recommendations of the Board and subsequent endorsers has resulted in the following:
 - a. Flight Manual Interim Change 16 dated 19 November 1965 adds criteria to be fulfilled before attempting three-engine takeoffs.
 - b. Flight Manual Interim Change 18 dated 15 December 1965 incorporates selected flight safety recommendations proposed during the KC/C-130F NATOPS Review Conference (February 1965).
 - c. Flight Manual Interim Change 20 dated 4 February 1966 provides current updated normal and emergency operating instructions for the C-130 engines and propellers.

NASC/my
Ser 12/ 526
11 May 1966

SPECIAL HANDLING REQUIRED IAW OPNAVINST 3750.6 SERIES

4. The cause of this accident has been recorded by the Center as follows:

a. Primary factor:

(1) PLANE COMMANDER (in co-pilot's seat - numerous errors in judgment and technique)

b. Contributing factors:

(1) PILOT (errors in judgment and technique)

(2) MATERIAL (propeller malfunction)

(3) OTHER PERSONNEL:

(a) Supervisory - wing level (absence of NATOPS Program)

(b) Supervisory - squadron commanding officer (inadequate NATOPS and Maintenance Program)

(c) Flight engineer (error in judgment)

Copy to:
CMC (AAP) w/ copy of 4th and
5th end's of subj AAR
COMNAVAIRPAC
CGFMFPAC
CGFIRSTMAW
NAVAIRSYSCOM (BUWEPs PSA)


PAUL D. BUIE

DEPARTMENTAL COMMENTS FOR "CLOSE OUT" LETTER ON ORIGINAL
REVIEW

- NOTE: 1. Negative report is required.
2. Positive comments will be in a format suitable for inclusion in the
"close out" letter.
3. Attach additional sheets if more space is required.

M&M DEPT:

No Comments.

EH 221E

INITIAL/CODE

AERO-MED DEPT:

INITIAL/CODE

U. S. NAVAL AVIATION SAFETY CENTER
U. S. NAVAL AIR STATION
NORFOLK, VIRGINIA 23511

Code 80/Fs
20 September 1965

NASC INVESTIGATION 13-65

REFERENCES: (a) Flight Manual, NAVWEPS 01-75GAA-1

1. INTRODUCTION.

KC-130F BUNO 149802, assigned to Marine Aerial Refueling/Transport Squadron 152 (VMGR-152) and commanded by Captain (b) (6), 7308, USMC, crashed at 1010 (local) on 24 August 1965 during an attempted take off from Kai Tak Airport, Hong Kong. There was a crew of 6 and 65 passengers were on board. During the take off attempt the aircraft swerved to the left, became airborne momentarily, dropped the left wing which hit a seawall and plunged into Kowloon Bay. Fire enveloped the wreckage as it came to rest in a near submerged condition. There were a total of 12 survivors consisting of 4 crew members and 8 passengers. 57 passengers and 2 crew members sustained fatal injuries from impact, burning and drowning. Damage to private property was negligible.

2. INVESTIGATION AND ANALYSIS.

a. The Plane Commander, Captain (b) (6) was designated a Naval Aviator in May 1955 and has accumulated 4006 total flight hours. He was designated a KC-130 Plane Commander on 23 August 1963 and has flown 1551 hours in C-130 aircraft. He holds a Special Instrument rating issued 2 January 1965. Prior to entering the 130 program, Captain (b) (6) had flown a tour in helicopters.

b. The co-pilot, 1st LT (b) (6), 7308, USMC, was designated a Naval Aviator on 1 July 1963 and has accumulated 1014 total flight hours of which 282 are in C-130 aircraft. He began training in C-130 aircraft in January 1965 and was designated a C-130 co-pilot on 25 May 1965. Prior to entering the C-130 program LT (b) (6) had flown a tour in an F-8 squadron.

c. The crew of the aircraft besides the plane commander and the co-pilot consisted of two flight engineers, S/SGT (b) (6), USMC, and S/SGT (b) (6), USMC, a navigator, SGT (b) (6), USMC, and a radio operator, CPL (b) (6), USMC. S/SGT (b) (6) had 2100 hours and S/SGT (b) (6) had 2000 hours in C-130 type aircraft plus considerable background in both helicopters and other fixed wing aircraft.

d. KC-130F BUNO 149802 was accepted in May 1962 and had accumulated 3209 total flight hours. The aircraft had received one Progressive Aircraft Rework (PAR) which was completed on 9 September 1963 at Lockheed Aircraft Corporation, Marietta, Ga. Since

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH OPNAVINST P3750.6E

NASC INVESTIGATION 1 -66

PAR the aircraft had flown 2026 hours. The last check performed was a 100 hours special inspection completed on 11 August 1965, and since that time the aircraft had logged 50 flight hours.

e. The engines, Allison T56-A7, were serial numbered 102473, 103027, 102510, and 103222 for engine locations one through four respectively. All engines except the number one engine are considered to have functioned normally. The number one engine had operated 2318 hours since new and 382 hours since overhaul. The gear box for this engine had operated 1400 hours since new and 391 hours since overhaul. The torque meter assembly had operated a total of 2770 hours since new and 1956 hours since overhaul. The propeller had operated 1625 hours since new. The entire engine assembly composed of the power section, gear box, torque meter assembly and propeller assembly had been installed on this aircraft as a unit 13 August. It received a 100 hour inspection on 17 August and had operated 50.2 hours since last inspection. During these hours since inspection the engine had malfunctioned on at least two occasions. One was an overspeed during let down and one was an overtemp during climb. In both cases the flight engineer had been able to correct the discrepancy by placing the Temperature Datum Switch (TDS) to the "NULL" position and selecting another engine as master engine.

f. Weather at the time of the accident was not a factor. Winds were calm. Temperature was 86 and dew point was 76.

g. Runway 13 at Kai Tak Airport is 8350 feet long and 200 feet wide. It is built on a fill in Kowloon Bay and is bounded on both sides by water. Elevation is 15 feet MSL.

h. Reconstruction of the flights leading up to this flight is of significance. The aircraft and crew of 6 departed MCAF Futema, Okinawa to the Vietnam area to perform a series of support flights, one of which was to Hong Kong. The cycle required one week. During this time it was normal for the plane commander and co-pilot to exchange cockpit positions, and such was done on this series. The occupant of the left seat made the take off and landing. The two flight engineers also alternated responsibility for the flight engineer's cockpit duties.

i. On the morning of 24 August the flight was scheduled to return to Da Nang, Vietnam with take off at 1000. LT (b) (6) manned the left seat and CAPT (b) (6) the right seat. S/SGT (b) (6) manned the flight engineers position while S/SGT (b) (6) was on the flight deck as an assistant. The navigator and radio operator positions were also manned.

j. Pre-flight, start and taxi to the runway were without incident. Passengers were given an emergency briefing by LT (b) (6).

prior to his manning the left seat.

k. After receiving take off clearance the aircraft moved onto the runway for final run up. All checks to this point were normal. During the run up it was noted that #1 engine was not developing power in response to throttle movement. An overspeed of 105% was registered on the tachometer, a high turbine inlet temperature (TIT) was noted and a low torque reading of about 5800 inch pounds was observed. The flight engineer attempted to correct the situation by turning the TDS to NULL and selecting another engine as engine master, but was unable to correct the discrepancy.

l. By this time the aircraft was delaying in position and other traffic had broken to land. The tower requested the C-130's intentions and a second request indicated the need for a decision to avoid having to give a wave off. At this time the plane commander elected to go ahead with a take off expecting that #1 engine would "probably come on line", and that "we can make it with three".

m. LT (b) (6) operated the throttle with his right hand and nose wheel steering with his left. Initial take off run was straight and controllable with all four throttles full forward. From this it is concluded that #1 engine was giving some effective thrust. Without thrust on #1 and full thrust on #4 the aircraft would have swerved immediately.

n. When the aircraft reached a speed of 60-70 knots a definite swerve to left developed. LT (b) (6) applied nose wheel steering and rudder but made no power changes. The flight engineer, S/SGT (b) (6), recalls reading 1200-1500 in. lbs. of torque on the #1 engine. It is believed most likely that this reading was observed at the time the swerve developed.

o. The aircraft continued to swerve nearing the left edge of the runway 3887 feet from start of take off run. From this point until the crash there is evidence of considerable confusion in the cockpit and breakdown in cockpit discipline. The flight engineer called "abort", the left seat pilot started to reduce power and at the same time the plane commander came in on the controls adding right rudder and right aileron as he pulled back on the yoke and forced the plane into the air at about 90 KIAS. Someone called for "differential power" and both #3 and #4 engines were retarded, #3 partially while #4 came to flight idle. Almost immediately the flight engineer added #3 to full power and it is believed that the plane commander again added #4 to full power as his speed dissipated.

p. The aircraft, after lift off, went into a left yaw of about 30 degrees in a steep left bank. It then rolled right through level in a nose high attitude, wallowed a bit and then fell off to the left in a stall. The plane commander states that in the final

instant before impact there was no control response.

q. The aircraft impacted the water in a left wing down nose down attitude with gear and 50% flaps still down. Just prior to impact the left wing tip hit a seawall spewing fuel from the seawall to impact point and fire broke out immediately.

r. The squadron policy on three engine take offs had recently been amended. Previously three engine take offs had not been permitted without the express approval of the commanding officer. Conditions in Vietnam are such that a C-130 at an outlying field awaiting approval from Okinawa for a three engine take off was unrealistic and a good possibility existed that the aircraft would be lost. Accordingly the policy was altered to permit three engine take offs at the plane commander's discretion. However, no passengers were to be carried on any three engine take off.

s. In this case the plane commander did not feel that a three engine take off was being made. LT (b) (6) in the left seat had not made a three engine take off in training, and states that he "thought it must be OK since nobody objected." The fact that #1 engine was producing partial power laid the trap. If the #1 engine had been feathered and #4 engine brought in gradually during take off run as prescribed in the handbook, there is no doubt that a safe take off could have been made.

t. It has been suggested that the #1 engine went into reverse. S/SGT (b) (6) states that it is his opinion that this did occur although no confirmation was found. The #1 engine was not recovered. However, positive thrust was being produced at the start of the take off roll or directional control would not have been maintained. After lift off a reversal would have made a roll to the right impossible even with #3 and #4 retarded. It is, therefore, concluded that #1 did not reverse.

u. The political situation in Hong Kong has a bearing on the pilot's decision to go ahead with one engine not performing properly. Agitation exists for all U. S. military to remain out of Hong Kong and operating hours are restricted. No take offs are permitted between 1300 and 1800. If the aircraft did not correct the discrepancy before 1230 it would probably mean a one day delay in departing. This in turn would have left a void in the squadrons commitments in Vietnam. CAPT (b) (6) is considered very conscientious and he was probably influenced to get back so that he would not be accused of shirking his duty by staying in Hong Kong.

v. The tempo of operations are considered to have a bearing on the pilot's decision to go ahead with one engine not performing properly. Pilots average between 100 and 150 hours per month with some as high as 180. Operations involve troop lifts and high priority cargo lifts to units in combat. Had this aircraft not returned to

Vietnam that day there would have been a void in the operating schedule which would have to be filled in from other resources or not met at all. The pilots decision to attempt take off under conditions less than optimum undoubtedly reflects pressure to complete the mission.

w. Flight crews are scheduled as individuals for each mission rather than using a standard crew. This is done to allow greater flexibility to scheduling. Detrimental effects are seen in this instance in that the crews reaction to an emergency situation were predicated on each individuals opinion of necessary corrective action. Decisions which were the responsibility of the plane commander were pre-empted to a degree by the co-pilot and the flight engineer. It is believed that the weakness in crew discipline contributed to the failure of the crew to regain directional control of the aircraft.

x. Passengers and crew did not wear life jackets. It is considered very questionable that life jackets would have saved more lives. Passengers entrapped in the fuselage would probably have been more entangled with a life jacket than without one. Had the survivors been wearing life jackets and had they inflated them, it is considered probable that more serious burning would have resulted from the fuel fed fire on the water's surface.

y. A review of KC-130 manuals shows that the NATOPS and flight manuals have not been combined. Information is sketchy concerning 3 engine take offs. The handbook provides one page consisting of a chart with marginal notes on the subject. The NATOPS is silent on the permissibility and techniques for 3 engine take offs.

g. CONCLUSIONS.

a. The most probable cause of this mishap is pilot factor on the part of the plane commander in that he directed a take off by a relatively inexperienced co-pilot of an aircraft which had one engine not performing normally and that, after so directing the take off, he failed to brief the proper technique for take off, and failed to assume command of the aircraft in sufficient time to either abort the take off or to execute a successful take off.

b. A contributing cause of this mishap is pilot factor on the part of co-pilot in that he failed to employ proper technique to maintain directional control during take off.

c. A contributing cause of this mishap is material failure of undetermined nature which limited the power available on the number one engine.

d. A contributing cause of this mishap is supervisory factor on the part of the plane commander in that there was a weakness in crew discipline.

4. RECOMMENDATIONS.

a. It is recommended that CNO raise the priority for updating and combining of the NATOPS and flight manuals for the C-130.

b. It is recommended that the Commandant of the Marine Corps review the training syllabus of transport squadrons to determine if a requirement exists for training pilots in three engine take offs in C-130 aircraft.

Distribution:

LIST A

CNO(OP-05F)

NASC/cr

Ser 53/1668

21 OCT 1965

*SPECIAL HANDLING REQUIRED IAW
OPNAV INST P3750.6 SERIES*

SPEEDLETTER

From: Commander, U. S. Naval Aviation Safety Center
To: Commanding Officer, Marine Aerial Refueler/Transport Squadron
ONE FIVE TWO

Subj: VMGR-152, AAR, ser 1-65A, KC-130F, BUNO 149802, occurring
24 Aug 1965, pilot (b) (6)

Advance copies of the subject aircraft accident report have not been received
by the Safety Center, as prescribed in paragraph 43 of OPNAVINST P3750.6E.

The Safety Center is not aware of a request for nor granting of a time extension.

Request status of the subject report.

(b) (6)

Copy to:
COMNAVAIRPAC
CGFMFPAC
COTHRDMAW

USE FOR URGENT
LETTERS ONLY

NAVAL SPEEDLETTER

DO NOT CLEAR THROUGH
COMMUNICATION OFFICE

(One box must be checked)

☐ REGULAR MAIL☐ SPECIAL DELIVERY☒ AIR MAIL☐ REGISTERED MAIL

CLASSIFICATION

UNCLASSIFIED

IN REPLY REFER TO

25:PIA:WFO
3760

DATE

3 November 1965

TO: Commander
U. S. Naval Aviation Safety Center
U. S. Naval Air Station
Norfolk, Virginia 23511

NAVAL SPEEDLETTER—

Permits dispatch or informal language.

May be sent (1) with enclosures, (2) in a window envelope (size 8 1/4" x 3 1/4"), if contents are not classified as confidential or higher, (3) to both naval and nonnaval activities.

Is packaged 500 sheets of white or of one color: yellow, pink, or green.

(Fold)

Subj: VMGR-152 AAR ser 1-65A, KC-130F, BUNO 149802 occurring 24 Aug 1965, pilot

(b) (6)

Ref: (a) Your spd ltr NASC/cr ser 53.1668 of 21Oct65 to VMGR-152

Reference (a) stated that no advance copies of subject AAR had been received by the Safety Center and requested status of the report.

Because of the potential implications and location of this accident, the Commanding General, Fleet Marine Force, Pacific assumed responsibility for the distribution of the subject AAR. As indicated on the third endorsement to subject AAR distribution has been made.

(b) (6)

Chief of Staff

COPY TO

COMNAVAIRPAC, CG FMFPAC, CG THIRD MAF, CG VMGR-152

ADDRESS: Commanding General
1st Marine Aircraft Wing, FMFPac
c/o FPO San Francisco,
California 96601

← SENDER'S MAILING ADDRESS

Address reply as shown at left; or reply hereon and return in window envelope (size 8 1/4" x 3 1/4"), if not classified as confidential or higher.

CLASSIFICATION

UNCLASSIFIED

NWSA
FSA-3:WHH
4 March 1966

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARAGRAPH 66, OPNAVINST
P3750.6E

FIFTH ENDORSEMENT on VMGR-152 AAR ser 1-65A concerning KC-130F BUNO
149802 accident occurring 24 August 1965, pilot (b) (6)

From: Chief, Bureau of Naval Weapons
To: Commander, U. S. Naval Aviation Safety Center

Subj: Aircraft Accident

Ref: (b) CG FMFPAC ltr ser 4C/4:IMM/3710 of 30 October 1965

1. Forwarded.

2. The Bureau of Naval Weapons in coordination with the U. S. Naval
Aviation Safety Center will reevaluate the adequacy of the emergency
exits in the C-130 aircraft.

3. By endorsement to reference (b) the Bureau of Naval Weapons has
requested the Naval Air Engineering Center to obtain and evaluate the
MATS life jacket for U. S. Navy usage. In the event this evaluation
proves unsatisfactory the Bureau will initiate a problem assignment for
the development of a replacement for the MK-2 life jacket.

4. The three engine performance data was corrected by Interim Change
No. 18 to the C-130 Flight Manual issued 15 December 1965.

5. The Bureau of Naval Weapons is requesting an Engineering Change
Proposal for installation of a loud speaker system in the passenger
compartment of the C-130 aircraft.

(b) (6)

By direction

Copy to:
COMNAVAIRPAC
CG FMFPAC
CG 1ST MAW
CO VMGR-152

3750
80/ 6006

27 OCT 1965

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 66, OPNAVINST P3750.6E

FOURTH ENDORSEMENT on VMGR-152 AAR ser 1-65A concerning KC-130F
BUNO 149802 accident occurring 24 August 1965, pilot (b) (6)

From: Commander Naval Air Force, U.S. Pacific Fleet
To: Commander, U.S. Naval Aviation Safety Center
Via: Chief, Bureau of Naval Weapons

Subj: VMGR-152 AAR ser 1-65A

Ref: (a) OPNAVINST P3750.6E

1. Readdressed and forwarded for BUWEPS consideration of the comments/
recommendations contained in paragraph 5 of the third endorsement.
2. This headquarters concurs in the comments and recommendations of the
Aircraft Accident Board, as modified by the remarks contained in subse-
quent endorsements.
3. It is requested that the Commander, Naval Aviation Safety Center take
sub-paragraph 3d of the third endorsement for action in an effort to ex-
pedite the recommended changes to the Flight Manual.
4. The following administrative errors are noted:
 - a. Block 1, Section C of OPNAV FORM 3750-1A correctly shows First
Lieutenant (b) (6) as the pilot (at controls at time of mishap). Ac-
cordingly, (b) (6) should be shown as the pilot on the lip of the outer
front cover of the AAR and in the identification line of each endorsement.
All activities holding copies of the AAR and the subsequent endorsements
thereto are requested to make this change.
 - b. The first endorsement makes reference to correspondence which has
not been so designated in the heading of the endorsement. Accordingly,
OPNAVINST P3750.6E is designated as reference (a).
 - c. The first and second endorsements do not show copy distribution
as required by sub-paragraph 48i of reference (a). The Commanding General,
First Marine Aircraft Wing and the Commanding Officer, Marine Aerial Re-
fueller Transport Squadron 152 are requested to ensure that copy distribu-
tion has been made to all activities holding advance copies of the AAR.

(b) (6)

/By direction

Copy to:
BUWEPS (FSA-3) CG 1stMAW
COMNAVAVNSAFECEN (2 copies) CG VMGR-152
CG FMFPAC

3750
80/6006
27 Oct 1965

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 66, OPNAVINST P3750.6E

FOURTH ENDORSEMENT on VWR-152 AAR ser 1-65A concerning KC-130F
BUNO 149802 accident occurring 24 August 1965, pilot (b) (6)

From: Commander Naval Air Force, U.S. Pacific Fleet
To: Commander, U.S. Naval Aviation Safety Center
Via: Chief, Bureau of Naval Weapons

Subj: VWR-152 AAR ser 1-65A

Ref: (a) OPNAVINST P3750.6E

1. Readdressed and forwarded for BUMERPS consideration of the comments/
recommendations contained in paragraph 5 of the third endorsement.
2. This headquarters concurs in the comments and recommendations of the
Aircraft Accident Board, as modified by the remarks contained in subse-
quent endorsements.
3. It is requested that the Commander, Naval Aviation Safety Center take
sub-paragraph 3d of the third endorsement for action in an effort to ex-
pedite the recommended changes to the Flight Manual.
4. The following administrative errors are noted:
 - a. Block 1, Section C of OPNAV FORM 3750-1A correctly shows First
Lieutenant (b) (6) as the pilot (at controls at time of mishap). Ac-
cordingly, (b) (6) should be shown as the pilot on the lip of the outer
front cover of the AAR and in the identification line of each endorsement.
All activities holding copies of the AAR and the subsequent endorsements
thereto are requested to make this change.
 - b. The first endorsement makes reference to correspondence which has
not been so designated in the heading of the endorsement. Accordingly,
OPNAVINST P3750.6E is designated as reference (a).
 - c. The first and second endorsements do not show copy distribution
as required by sub-paragraph 4d1 of reference (a). The Commanding General,
First Marine Aircraft Wing and the Commanding Officer, Marine Aerial Re-
fueler Transport Squadron 152 are requested to ensure that copy distribu-
tion has been made to all activities holding advance copies of the AAR.

(b) (6)

By direction

Copy to:
BUMERPS (FSA-3) CO 1st MAW
COMNAVAIRSAFECEN (2 copies) CO VWR-152
CG FMFPAC

18:CBA:ejz

3750

21 OCT 1965

THIRD ENDORSEMENT on VMGR-152 AAR 1-65A concerning KC-130F BuNo 149802 occurring 24 Aug 1965, pilot (b) (6)

From: Commanding General, Fleet Marine Force, Pacific
To: Commander, U. S. Naval Aviation Safety Center
Via: Commander, U. S. Naval Air Force, Pacific

Subj: VMGR-152 AAR 1-65A; forwarding of

1. Forwarded, concurring with the comments and recommendations of the Aircraft Accident Board and subsequent endorsers subject to the following comments.

2. It is concluded that the primary cause factor in this accident was pilot error in technique and judgment. (b) (5)

(b) (5)

(b) (5) Operational control of VMGR-152 was vested with the 1st Marine Aircraft Wing Headquarters even though administratively attached to MWSG-17. Under these circumstances the normal Group/Squadron relationship in Safety, NATOPS and maintenance matters did not exist.

3. In times of crisis, to no less degree than peacetime, safety in flight operations is paramount. This is true in all flight operations. In the case of the transport squadrons, or any other unit flying passengers, NATOPS/instrument checks and flights by Safety/NATOPS personnel are the primary ways that lapses in safe operating procedures can be detected. It is mandatory that these checks be conducted or effected by higher headquarters, as well as within the squadrons.

a. The Squadron Commander, in his endorsement, made reference to a lack of training flight time as a reason for not accomplishing the required NATOPS flight checks. The availability of flight time for training purposes in the combat environment is desirable. However, to effectively administer a NATOPS Program, command attention is required. The First Endorsee references enclosure (32) as an indicator of the desire of the squadron to adhere to NATOPS. Enclosure (20) shows that only seven out of twenty Aircraft Commanders had completed open book examinations with 3 having closed book examinations on record.

b. Accepting the fact that flight checks could not be performed because of lack of "training" time, the administering of written examinations alone would have caused the flight crews to be "exposed" to NATOPS procedures. Neither Captain (b) (6) nor Lieutenant (b) (6) had closed or open book examinations or flight checks on record. In as much as STAN/EVAL checks can be administered on any flight, no justification exists for all Aircraft Commanders to be deficient in these annual checks. Selective scheduling on test flights, straight cargo flights, PAR runs, etc., should have permitted all pilots to practice/participate in a majority of the required NATOPS Emergency Checks.

c. Command attention in the form of an aggressive NATOPS Program from the Wing level did not exist immediately prior to this accident. Staff visits by representatives of this headquarters during September showed the absence of a NATOPS Program at the 1st Marine Aircraft Wing Headquarters level with no NATOPS Officer assigned. The last NATOPS Review Conference held on 22-25 June 1965 by the Chief of Naval Operations resolved—"Some supervisors regard times of crisis as a license to disregard Aviation Safety and NATOPS procedures."

d. Other NATOPS areas wherein command attention may have prevented this accident, relate to the present KC-130F/C-130F Flight Manual, NAVWEPS 01-75GAA-1. This manual has not been revised since 15 November 1963. Two review conferences, 4-7 February 1964 and 8-12 February 1965, were convened at MCAS, El Toro to revise both the flight manual and the NATOPS Manual. Changes to the NATOPS Manual have been executed, but 35 recommended changes from the 1964 conference and 106 recommended changes from the 1965 conference have not been published in the flight manual. Furthermore, there have been no instructions from CNO to effect interim changes to this manual reflecting the recommendations of the conferees. The Commanding Officer, VMGR-352, the KC-130 Model Manager, has gone on record in his speedletter, NATOPS, 9 September 1965, to CNO, by stating: "It is felt that these revisions are necessary to conduct effective training, standardization and in many cases, flight safety."

4. With respect to the matter of maintenance supervision the thirteen day maintenance history of KC-130F Bureau Number 149802 prior to the 24 August accident contained in enclosure (18) and the basic AAR shows an almost complete disregard of trend analysis and maintenance supervision.

a. Particularly relevant to the maintenance errors associated with this accident are:

(1) The failure to record all known discrepancies on the "B" portion of the yellow sheet.

(2) The lack of proper maintenance procedures in trouble shooting and writing off a "downing" discrepancy on an aircraft.

(3) The failure to recognize a definite maintenance trend on a reoccurring discrepancy, and to analyze this trend in order to take proper corrective action.

(4) The failure to issue and maintain completed work orders on known and reported discrepancies.

(5) The lack of liaison between flight and maintenance crews.

(6) The failure to comply with published directives, BUWEPS Instruction 4700.2A, paragraph 806, which required a test flight after a major grounding discrepancy that could not be pinpointed.

b. A maintenance program which disregards "trends" by repairing the trouble, without finding the cause, must be considered deficient. In order to be effective a maintenance program requires close supervision by Quality Control, Maintenance Control and the Maintenance Officer. In this accident, had the essential maintenance procedures been followed, the efforts of all should have uncovered the basic maintenance deficiency in the aircraft—a faulty propeller. Adherence to established maintenance procedures and a program of command supervision to assure conformance must be followed.

5. The following comments are considered pertinent to the accident.

a. The KC-130 ditching emergency exits in the passenger cabin are limited to three (3) small and inaccessible exits which were not used in this accident. Their inaccessibility could have accounted for the fact that no passengers from the center section survived. Survivors who were questioned did not know where the exits were located. Intensive study by the Naval Aviation Safety Center and BUWEPS is needed to determine the adequacy of these exits and to provide a solution to the problem.

b. The Board found that there was no evidence of any casualties as the result of passengers or crew members not wearing a life jacket. However, the bulk of the currently used life jacket precludes its being readily accessible as prescribed by OPNAVINST P3710.7B. In order for KC-130 Squadrons to comply with this instruction, life vests of less bulk (MATS type) should be provided. In the interim, life jackets will be worn on all overwater take-offs and landings by the crew and passengers of KC-130 aircraft within FMFPac.

c. On page A3-1 of the Flight Manual, lines 20 through 24 advise the pilot that this aircraft functions well on 3 engines with no maximum

fuel weight restrictions. By extolling the KC-130 3 engine performance, this statement can act to encourage pilots to attempt 3 engine take-offs. The only reference to 3 engine take-offs should be restricted to the emergency section. This command has initiated a proposed urgent interim change to the flight manual requesting elimination of the sentences on page A3-1, beginning, "The airplane has excellent three engine take-off characteristics-----".

d. There is no loudspeaker system in the passenger compartment of the KC-130. Surviving passengers statements show that the position and operation of emergency exits were not known and understood. This was because of a failure of the passenger briefing system either in content or because the briefing was not heard and understood. Briefing on these exits can only be accomplished with the passengers inside the compartment. The size of the compartment and noise level dictates that a loudspeaker system be provided for all KC-130 aircraft.

6. The following action has been taken to assist in preventing a possible recurrence of this type of accident:

a. Three engine take-offs except under the most rigidly controlled conditions in a combat area have been prohibited.

b. Emergency briefings to include specific items to be accomplished prior to every transport type aircraft take-off have been directed.

c. The necessity for adhering to established maintenance standards and procedures have been reemphasized.

d. A command policy of absolute adherence to the NATOPS Program by all subordinate units has been established with quarterly inspections to be carried out by this headquarters.

e. A proposed interim change to the KC-130F Flight Manual eliminating the paragraph that extolls the KC-130 performance on three engine take-offs has been recommended.

7. The following administrative errors are noted:

a. Page 1, Section A, OPNAV Form 3750-1A:

(1) Block 3 should read 241007H August.

(2) Block 12 should read 0401.

b. Page 1, Section B, OPNAV Form 3750-1A:

(1) Enclosure (19) does not agree with this section.

(a) Total time enclosure (19) (b) (6) 989.4 all models.

1. Block 11 Total Time this section: 1016 all models.

2. Block 14 Total Time all series this model: 274.

3. Block 14 Total Time enclosure (19) this model: 284.

c. Page 1a, Section A, OPNAV Form 3750-1A:

(1) Block 3 should read 241007H August.

(2) Block 14 reads 1553 and enclosure (19) reads 1548.2.

d. Holders of the basic AAR are directed to correct the above administrative errors. The Commanding General, 1st Marine Aircraft Wing is further directed to correct the discrepancies in the reported flight hours.

8. Because of the circumstances surrounding this accident the distribution of the AAR has been restricted to the operational chain of command and the Commandant of the Marine Corps.


V. H. KRULAK

DISTRIBUTION:
COMNAVAIRPAC
COMNAVAVNSAFECEN
CMC (Code AAP)
CG, 1ST MAW
CO, VMGR-152

25:PTA:deg
3750
30 Sep 1965

SECOND ENDORSEMENT on VMGR-152 AAR 1-65 involving KC-130F BuNo 149802
occurring 24 August 1965. Pilot: (b) (6)

From: Commanding General, 1st Marine Aircraft Wing
To: Commander, U. S. Naval Aviation Safety Center
Via: (1) Commanding General, Fleet Marine Force, Pacific
(2) Commander, U. S. Naval Air Forces, Pacific Fleet

Subj: VMGR-152 AAR 1-65, forwarding of

1. Forwarded concurring with the conclusions and recommendations of the Board and the first endorser subject to the following comments:

a. There is sufficient evidence contained in the report to further assign poor pilot technique in addition to pilot error as the primary cause of the accident as indicated under personnel factors - Part VII B.

b. Although not addressed specifically by the Board, it has been determined that for conditions existing, i.e. ambient air temperature of 86 degrees fahrenheit and aircraft weight of 115,000 pounds, VMC would be 87 knots. Take-off and refusal speed would both be 102 knots and stall speed, power-off with flaps, would be 98 knots in level flight. Normal take-off distance under the above conditions would be 2600 feet with all four engines operating normally. Take-off distance with Number 1 engine feathered would be approximately 5200 feet assuming that full power on Number 4 could not be utilized until VMC of 87 knots had been exceeded. With these factors in mind, it is concluded that take-off could have been successfully accomplished if proper technique had been utilized, as specified by NATOPS and the Flight Manual, on a runway of this length (8350 feet) and elevation of 15 feet above sea level.

c. Once the Aircraft Commander made the decision to take-off, even though it was in violation of squadron policy, it was his responsibility to accomplish it in an approved manner under approved procedures. This he did not do.

(1) Captain (b) (6) accepted take-off instructions indicating that he was ready for take-off when in fact he was not.

(2) Upon making the decision to take-off he did not brief any of the crew regarding the specific techniques required to accomplish it.

(3) He entrusted the actual control of the aircraft to Lt. (b) (6) who had never made a take-off simulating existing conditions.

(4) He allowed himself to be hurried and did not properly diagnose the trouble or even correctly interpret the power available from the Number 1 engine.

(5) He did not feather the engine as required by accepted procedures.

(6) It is apparent that Captain (b) (6) passed control (yoke) to Lt. (b) (6) before reaching VMC for the existing flight conditions which aggravated the lack of directional control as Lt. (b) (6) at that time, would have to remove his left hand from the nosewheel steering to take over the yoke. At this point full right rudder might not have been applied due to the forces involved as both pilots had neglected to crank in additional right trim, either prior to roll, during the roll, or after becoming airborne.

(7) Once additional swerve was encountered Captain (b) (6) again took control and pulled the aircraft into the air prematurely. He not only rejected the attempts of the co-pilot and the flight engineer to abort but assumed control at a critical time which created additional confusion in the cockpit.

(8) It is also apparent that Captain (b) (6) was not properly aware of the marginal air speed when he pulled the aircraft into the air, and that panic had taken over in the cockpit, for amongst everything else no one retracted the gear. Once the aircraft was pulled prematurely into the air in an acute asymmetric power condition, out of trim, it is doubtful that a crash could be avoided.

(9) It appears that Captain (b) (6) attempted to regain directional control by reducing power to flight idle on Number 4 engine and part way on Number 3 engine and had in fact regained directional control when the flight engineer, concerned about the loss of altitude, shoved the power full forward on both engines and thereby eliminated any chance of recovery or ditching in a level attitude.

d. Throughout Part VII of the report the board makes positive statements which are not substantiated; however, there is ample evidence contained in the report to support the conclusions and recommendations.

e. On 13 August 1965 the Number 1 engine was changed on this aircraft. (See enclosure (18), Statement of the Aircraft Maintenance Officer, VMGR-152). At no place in the AAR is there any mention made of the results of the test hop which followed this engine change. It has been ascertained that the engine was test flown following installation.

2. The Board states that the squadron did not have a specifically designated NATOPS officer and recommends that the squadron review its entire NATOPS situation. The First Endorser has documented the fact that he has had an assigned NATOPS officer and a NATOPS Standardization Instructor since August of 1964. (See enclosures (33), (34), (35), (36), (37), (38) and (39). The First Endorser further indicates that he has given the squadron NATOPS program the necessary emphasis and that this program will continue with the required supervision.

3. The Board notes that there were no records available concerning inspections of this unit. This unit received an overall excellent mark in the annual A&M inspection performed by this Headquarters. In addition to this, the unit has been the object of other supervisory actions and visits by various staff officers including the previous Wing Commander and present Assistant Wing Commander who flew with the squadron.
4. Since VMGR-152 moved from Iwakuni to Futema it has been under the direct operational control of the Wing vice MNSG-17. In the future there will be closer and more frequent supervision and inspections of the squadron and its operational procedures by wing command and staff units.
5. The commanding officer of VMGR-152 at the time of the accident being reported on, LtCol (b) (6) was due for rotation on or about 24 September. He has now been replaced by LtCol (b) (6) who was a member of a board involved in a separate investigation of this accident. This assignment has been planned since June. This move should assist in implementing the Board's recommendations at the squadron level.
6. The following administrative errors were noted:
 - a. The AAR (The Form and the Account) is not numbered in accordance with para. 44, OPNAVINST 3750.6E. The form and the two attached sheets containing passenger names should be numbered 1, 1a, 1b, 1c, 2 and 3. The pages presently numbered 1 through 16 should be renumbered 4 through 19.
 - b. Page 1 (Form 3750.1A). Section A, block A-16 should read LOOE vice 280. Block A-18 should read "...collision with sea wall and water".
 - c. Form 3750.1A, page 1a, blocks A-1 thru A-5 should be filled in to reflect the same information as on page 1, blocks A-1 thru A-5.
 - d. Form 3750.1A, page 3, part III, copy distribution not filled in. This will be filled in at a later date.
 - e. Enclosures 21 and 23 do not have the statement affixed, "Special Handling Required in Accordance With Para 66 OPNAVINST P3750.6E".
 - f. The pages of the First Endorsement presently numbered 1 thru 5 should be renumbered 20 thru 24.
 - g. The pages of the enclosure to the First Endorsement should be tabbed in the same manner as the enclosures to the report.
7. It is requested that holders of this AAR make the administrative corrections as noted above.

25:PLA:deg
3750

8. It is noted that enclosures (2) and (3) (Pilot's and Co-Pilot's statements) do not contain the required statement (para 44.2(2) OPNAVINST 3750.6E) as to how the accident could have been prevented, or its seriousness minimized.

Keith B. McCutcheon
KEITH B. MCCUTCHEON

2 SEP 1965

FIRST ENDORSEMENT on VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965 Pilot: (b) (6)

From: Commanding Officer, Marine Aerial Refueler Transport Squadron 152
To: Commander, Naval Aviation Safety Center
Via: (1) Commanding General, 1st Marine Aircraft Wing
(2) Commanding General, Fleet Marine Force, Pacific
(3) Commander, U. S. Naval Air Forces, Pacific Fleet

Subj: VMGR-152 AAR 1-65A, forwarding of

1. In accordance with the provisions of reference (a), the following comments are submitted:

a. Recommendations: VMGR-152 immediately review its entire NATOPS situation and take steps to insure compliance with all NATOPS requirements.

Comment: A thorough, searching review has been accomplished and a more positive position has been established. The value of the NATOPS program has long been recognized by this squadron as evidenced by the request for training flight time (Enclosure (32)) which was submitted after a period in which the monthly flight time was 874 hours (July 1964), and 807 hours (August 1964). Although the number of assigned aircraft remained constant (14) and pilot and enlisted strength remained about the same (Average on board, 30 pilots, 230-250 enlisted), during the same period in 1965 the monthly flight time increased to 1576 hours (July), and 1562 (August). These facts are provided not as a defense or excuse for the position in which the squadron placed itself with regards to NATOPS but merely to present a complete picture.

All pilots of the squadron have at the present time completed the open and closed book examinations and the oral examinations on the KC-130F. 4 pilots lack standardization evaluation flight checks. Estimated completion date is 27 September 1965 for two pilots; the other two are temporarily grounded.

All assigned Navigators are current.

All assigned Flight Engineers are current except 4. Estimated completion date for standardization evaluation checks is 1 October 1965.

All assigned Radio Operators and Loadmasters have completed their oral examinations and are receiving standardization evaluation checks. Estimated completion date is 1 October 1965.

A more comprehensive individual qualification file jacket is being prepared for each flight crew member. This file jacket will contain a copy of the completed open and closed book examinations plus the graded oral examination work sheet, the completed standardization evaluation knee pad work sheet, and the NATOPS standardization evaluation report. Estimated completion date is 10 October 1965.

The records of this organization indicate that a NATOPS Officer or NATOPS Standardization Instructor has been designated continuously since at least 31 August 1964. (No check of the records has been made beyond that date.) This is evidenced by Enclosures (33), (34), (35), (36), (37), (38) and (39).

The Squadron NATOPS Officer on 24 August had been assigned to that duty on 4 June 1965 as evidenced by Enclosure (38) and (39). Three additional Standardization Instructors have been assigned.

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66, OPNAV INST P3750.6E

ORIGINAL

NATOPS requires a crew and passenger briefing. Although NATOPS has not provided for specific KC-130F briefings in these areas, the Squadron has a Standard Crew Brief Card, Enclosure (40), and a Standard Passenger Brief, Enclosure (41). Copies of the Standard Crew Brief were provided initially for pilots and flight engineers about 30 April 1965, Enclosure (42), and a supply has been continuously maintained in the squadron flight office since that date. A copy of the Squadron Passenger Brief, which has been in use in the squadron for at least five months is part of the paper work prepared by the squadron operations section and furnished each flight crew prior to departure on every scheduled flight.

b. Recommendation: VMGR-152 immediately review its maintenance organization, particularly the Trend Analysis Function, to ensure that, by coordinated effort of all involved, discrepancies are not allowed to be written off without adequate explanation and that unsafe trends are dealt with in a timely fashion.

Comment: A thorough review of the maintenance organization with particular emphasis on the Trend Analysis function has been undertaken by the Executive Officer and the Operations Officer. Their preliminary report indicates that the maintenance department is staffed by competent, capable officers and men. It is organized and functioning in accordance with Bureau of Naval Weapons Instruction 4700.2A, "The Naval Aircraft Maintenance Program", directives from Commander Naval Air Forces, Pacific Fleet and the Commanding General, First Marine Aircraft Wing.

The Maintenance Officer has instituted an aggressive program to bring to the attention of all engineering personnel the necessity for thorough and complete accomplishment of their work. The qualifications of the Collateral Duty Inspectors have been evaluated and found to be wholly in consonance with the requirements of their jobs. A positive approach to reemphasize the necessity of complete and accurate write ups on the Yellow Sheets has been put forth alerting the aircrews, particularly, Pilots and Flight Engineers, to the unchanging requirement for concise, accurate and complete Yellow Sheets. The Maintenance Control and the Quality Control Sections are performing their collecting, collating and correlating functions in an efficient manner. The qualifications of the Collateral Duty and Quality Control Inspectors have been reaffirmed and the functions of the Quality Control Divisions pertaining to trend analysis have been studied and affirmed as being capable of producing timely and effective analysis of recurring discrepancies. The supervision of the various functions of the Maintenance Department is being capably and efficiently accomplished.

c. Recommendation: That it be emphasized at each level of command that relaxation of normally high standards due to wartime deployment with less than desirable operating conditions is intolerable and unsafe. It is emphasized that these conditions accentuate the requirement for most careful and detailed command attention.

Comment: The safety program within this squadron has been dynamic, aggressive and productive prior to this accident. At pilots meetings, informal small group meetings and in our day to day conversations, the theme of safety first has continually been emphasized by the Commanding Officer, Executive Officer, Operations Officer, Safety Officer, Maintenance Officer, NATOPS Officer and almost without exception, every officer in the squadron. Particular emphasis had been placed on the fact that we were operating under a combat situation and I have personally directed on many occasions that there be no compromise with safety. At every pilots meeting the Safety Officer, when present, always had some pertinent piece of information or generally applicable precautionary instruction to impart for the benefit of those present. The Squadron Safety Officer at frequent intervals produced Special Notices for Flight Crews of which representative samples are attached, Enclosures (43), (44), (45), (46) and (47). Repeated emphasis on the spirit and

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

VMG-152 AAR 1-65A involving KC-130F HUNG 149802 occurring 24 August 1965
Pilot: (b)(6)

intent of Aircraft Fleet Marine Forces Pacific Safety Bulletin 3750 dated 19 March 1965, excerpts from which were distributed to all pilots about 30 April 1965, has been and will continue to be made. (Enclosure (40)). A read and initial folder was and is provided in the Squadron Operations Office. Periodic checks to make certain that all pilots are reading the contents of this folder, are made by the Safety Officer, Operations Officer and the Executive Officer. Deviations from the expected and desired high standards set by the squadron, which come to the attention of the command are dealt with on an individual basis and action deemed appropriate is promptly taken. A daily, more constant more aggressive safety program has been instituted and will enable the Squadron to regain its reputation for safe, professional operating habits.

d. Recommendation: That three engine takeoffs in KC-130 aircraft not be flatly prohibited but rather that the conditions warranting them be carefully proscribed.

Comment: Concurred in: The procedures outlined in the Pilots Handbook, when followed, will always result in a safe, comfortable three engine takeoff. In this regard the policy in this Squadron has been and is that three engine takeoffs are authorized only under the following conditions: The Aircraft Commander has determined that the aircraft cannot be repaired locally; he must carefully review the applicable procedures and charts contained in the various sections of the pilots handbook, a copy of which is carried in each aircraft; determine that existing runway conditions and weather conditions are such that a safe three engine takeoff can, in his opinion, be accomplished; a thorough crew briefing must be given before the application of takeoff power and no passengers or cargo are to be carried in the aircraft. This policy had been announced during at least one pilots meeting subsequent to 10 May 1965 by me. In addition it has been discussed in informal group meetings in the Squadron area on several other occasions. The decision to make a three engine takeoff rests solely with the Aircraft Commander and he is under no pressure to do so.

The majority of our flight operations are conducted between our home base (now in Okinawa but prior to 11 August 1965, Iwakuni, Japan) and Da Nang Air Force Base, South Viet Nam; and to airfields located within 100 miles of Da Nang AFB. There are no facilities and very limited equipment available for accomplishing repairs at Da Nang. None of the other fields in South Viet Nam where we normally operate have equipment or facilities equivalent to those at Da Nang.

Aircraft Commanders, when conducting flight operations in South Viet Nam, are authorized, subject to the conditions outlined above, to flight ferry an aircraft on three engines to Da Nang and if repairs cannot be accomplished there to continue the flight to home base via an overflight of the Philippine Islands.

Based on our past experience, it has proven to be more efficient to fly the aircraft back to home base and repair it there where complete repair facilities exist than to gather a work crew, and divert an aircraft from another mission in order to take tools, parts and personnel to South Viet Nam.

Since 24 August 1965, I have reiterated this policy at pilot meetings and have personally briefed each pilot on the procedure to be followed and conditions warranting a three engine takeoff.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

e. Report of Pilot Experience.

(1) An examination of Captain (b) (6) Flight Record shows no previous accidents recorded. At the time of the accident he had flown 1548.2 hours in KC-130 type aircraft, 32.5 hours of which had been flown in the preceding 30 days. He had not flown on 24 August 1965 prior to the flight which resulted in this accident and had flown 4.4 hours the previous day. His first flight in KC-130 aircraft was on 18 March 1963 and he has flown no other type aircraft since that time. He was designated a T2P in the KC-130F on 2 May 1963 and an Aircraft Commander in the KC-130F on 28 August 1963. He has held that rating continuously since it was issued.

In addition to his KC-130F experience, Captain (b) (6) had accumulated additional transport aircraft experience. His record shows 814 hours in R4Q-2/C-119 type aircraft during the period 1 May 1961 to 30 April 1963. He was designated T2P in the R4Q-2 on 19 June 1961 and TFC in the R4Q-2 on 30 April 1962.

His record further indicates that he was issued a Standard Instrument Card on 10 February 1961 and a Special Instrument Card on 24 December 1963 and that his current instrument rating is Special.

At the time of this accident, Captain (b) (6) was considered to be a fully qualified Aircraft Commander in the KC-130 aircraft.

(2) An examination of 1stLt (b) (6) Flight Record shows no previous accidents recorded. At the time of the accident he had flown 283.5 hours in KC-130 type aircraft, 131.7 of which he had flown in the preceding 30 days. He had not flown on 24 August 1965 prior to the flight which resulted in this accident and had flown 4.4 hours the previous day. His first flight in the KC-130 aircraft was on 23 February 1965 and he has flown no other type aircraft since 12 April 1965. He was designated a Co-Pilot in the KC-130F on 25 May 1965. He has held that rating continuously since it was issued.

His record further indicates that he was issued a Standard Instrument Card on 12 March 1963 and that his current instrument rating is Standard.

1stLt (b) (6) at the time of this accident, was considered to be a fully qualified Co-Pilot in the KC-130F aircraft.

f. Comment on the AAR:

I am unable to offer any explanation for Captain (b) (6) decision to attempt a takeoff under the conditions indicated in the report. His conduct was in such contradiction to his behavior as I have known it over a period of four years that it is unbelievable.

Nor can I account for the actions of Captain (b) (6) and Lt (b) (6) in commencing a takeoff under the conditions plainly evident to them and in direct contrast to the NATOPS instruction calling for a crew briefing. As indicated in paragraph 4 of Enclosure (40), the standard crew brief in this squadron directs that "When other than normal conditions exist, there must be prior to takeoff a thorough understanding among all crew members as to their responsibilities." The above notwithstanding, Captain (b) (6) in his previous duty assignment before joining this squadron had been performing duties as a flight instructor in the KC-130 and was well aware of the necessity for a crew briefing before every takeoff.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

The fact that he was in the right or co-pilot's seat does not relieve him of his responsibility, as Aircraft Commander, to see that the crew briefing was given by the actual pilot is complete and thorough; or to correct and enlarge upon the briefing given by that pilot if it is not correct and adequate for the situation.

The failure of Sergeant (b) (6) to be more forceful in his pointing out to Captain (b) (6) the fact that he had no control over the number one propeller is also difficult to understand. Of all the component parts of this aircraft, the propeller is the one for which all crew members have the most respect and concern. To knowingly commence a takeoff under a situation in which no control can be exercised over a propeller even before the brakes are released without additional comment on his part is beyond any comprehension.

As has been pointed out previously, most of our operations are conducted between Okinawa (and Japan) and South Viet Nam. We had during the time that Captain (b) (6) was operating from Da Nang an average of 4 squadron aircraft fly into that field each day. It is the announced policy and standard practice for the pilot of the Da Nang based aircraft to replace his aircraft, if it has mechanical deficiencies, that cannot be repaired locally, with one of the other squadron aircraft passing through so that the Da Nang detachment always has the best aircraft available. This practice has been in effect since 30 May 1965 when a squadron aircraft was first positioned at Da Nang.

For these reasons and those stated in the AAR, I concur with the conclusion of the Board as to the cause of the accident in the case of the Aircraft Commander, Co-Pilot, and Flight Engineer.

The Board assigned as a contributing factor supervisory error on the part of the Commanding Officer in three areas: NATOPS, Maintenance Supervision, and Flight Safety.

In addition to my comments on recommendation a., regarding NATOPS, I wish to state that the squadron did have a NATOPS program and that it was the intention of the NATOPS Officer to include in the flight period for the instrument renewal check a NATOPS Standardization Evaluation Check.

Regarding the alleged lack of Maintenance Supervision, during our move to Okinawa I was never informed of any breakdown in the trend analysis function although I met almost daily with the Maintenance Officer. I was constantly informed in response to questions that the move was progressing satisfactorily and that no problems existed.

In addition to my comments on recommendation c., command attention was constantly in evidence during my absence in the person of my Executive Officer.

I have never seen manifested nor have I encouraged the "sense of urgency that caused shortcutting of sound procedures and a compromise of sensible safety standards" that the Board indicates was present in the squadron. Although we were heavily committed, we were never pressured by higher authority to fulfill any commitment. Nor did I ever on any time indicate to any man or officer in this unit that any compromise with safety would be requested or permitted. Crew rest was stressed frequently as was the necessity for continued safe operating practices. At the time of this accident, the squadron had accumulated 51,037 accident free flight hours. We are all working diligently to surpass that figure.

Austin C. Fitzgerald
AUSTIN C. FITZGERALD

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

ORIGINAL

3:VJS:dc
1500
23 Sep 1964

FIRST ENDORSEMENT on CO, VMGR-152 ltr 6/JRP/ggi 1500 of 31 August 1964

From: Commanding General, First Marine Aircraft Wing
To: Commanding Officer, Marine Aerial Refueler/Transport Squadron 152

Subj: Pilot Training Flights

1. Returned.

2. Pilot training flights commencing 1 October 1964 are approved to the extent that no more than forty hours will be flown during any one month and when such training will not interfere with scheduled operations.

/s/ (b) (6)
By direction

Certified to be a True Copy

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 63, OPNAVINST
P3750.6E

ENCLOSURE (32)

ORIGINAL

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
c/o Fleet Post Office, San Francisco, California 96601

6/JRP/ggi
1500
21 Aug 1964

From: Commanding Officer
To: Commanding General, 1st Marine Aircraft Wing

Subj: Pilot Training Flights; request for

1. Under the present Wing Air Transport Control Officer system for monitoring and controlling all KC-130F commitments, there are no provisions made to provide training time for the pilots of this squadron. The normal commitments for the KC-130F are not varied enough to meet the Phase I and Phase II training requirements.
2. Not all of the KC-130F pilots assigned to the First Marine Aircraft Wing, are completely trained or qualified in all phases of operation of the aircraft. Many of the co-pilots are minimum Phase I qualified and only a few of the aircraft commanders are completely Phase II qualified.
3. The fifty hour average monthly flight time for pilots in this squadron would appear to be sufficient to qualify in all phases of KC-130F operations. However, since all flights with the exception of test flights are committed, little if any training can be accomplished.
4. Since it is neither squadron policy nor sound procedure to subject passengers to simulated engine-out emergencies or to maximum effort take-offs and landings, a need exists for pure training flights conducted under a training environment.
5. In addition to the above type training, there is also a requirement for training in various instrument approaches and procedures. It is squadron policy to conduct IFR approaches at all stops whenever practical. The primary approach at the fields used most consistently by this squadron is a tacan or random radar penetration to a GCA final. This tends towards redundancy, yet approach controllers are reluctant to grant other type approaches inasmuch as it interrupts the orderly flow of traffic. Pilots, thus tend to reach a low state of proficiency in other types of instrument approaches.

Certified to be a True Copy

(b) (6)

ENCLOSURE (32)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 63, CPNAVINST
P3750.5E

ORIGINAL

6/JRP/ggi
31 Aug 1964

6. Based on a two hour flight per day during a five day week, it is requested that forty hours per month be made available to this squadron for air crew training and proficiency in order that crew members may learn, practice and maintain proficiency in all phases of KC-130F operations.

/s/ JAMES R. PRIDDY
JAMES R. PRIDDY

Copy to: CO, MWSG-17

Certified to be a True Copy

(b) (6)



SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 63, CPNAVINST
P3750.6E

ORIGINAL

1ST ENDORSEMENT on VMGR-152 AAR 1-65A involving KC-130F BuNo 148802 occurring
24 August 1965

Pilot: (b) (6)

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SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, OPNAVINST
P3750.6E

ORIGINAL

MARINE ASSET, REFUELER TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
c/o Fleet Post Office, San Francisco, California 96601

1/GDD/egi
14 August 1964

SQUADRON SPECIAL ORDER
NUMBER.....18-64

EXTRACT

1. The following assignments are effected. All previous assignments are revoked.

NAME	:EFFECTIVE DATE :	PRIMARY DUTY :	ADDITIONAL DUTIES
OPERATIONS SECTION	:	:	:
Capt (b) (6)	: 22 May 1964	: Squadron Pilot	: AsstOpnsO; OpnsTrngO; NATOPS Stand Inst
(b) (6) USMCR 7308/7304/6402	:	:	:

JAMES R. PRIDDY
Lieutenant Colonel, U. S. Marine Corps
Commanding

DISTRIBUTION: "C" plus each individual (1)

Certified to be a True Copy :

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 55, CPNAVINST
P3750.6E

ENCLOSURE (33)

ORIGINAL

MARINE AERIAL REFUELER TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
c/o Fleet Post Office, San Francisco, California 96601

1/REF/egi
17 August 1964

SQUADRON SPECIAL ORDER
NUMBER.....19-64

EXTRACT

1. The following assignments of additional duties are effected.

NAME	EFFECTIVE DATE	ADDITIONAL DUTIES
Capt (b) (6)	: 15 Aug 1964	: FltO; NATOPS O
(b) (6) 7308/7333/6402	:	: NATOPS Stand Inst effective 13 Aug 1964

JAMES R. PRIDDY
Lieutenant Colonel, U. S. Marine Corps
Commanding

DISTRIBUTION: "C" plus each individual (1)

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, OPNAVINST
P3750.6E

ENCLOSURE 34)

ORIGINAL

MARINE AERIAL REFUELER TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
c/o Fleet Post Office, San Francisco, California 96601

1/RFKL/ggi
31 Aug 1964

EXTRACT

SQUADRON SPECIAL ORDER
NUMBER.....20-64

1. The following assignments are effected. All previous assignments are revoked.

NAME	EFFECTIVE DATE	PRIMARY DUTY	ADDITIONAL DUTIES
Capt (b) (6)	1 Sep 1964	Squadron Pilot	AsstOpsO; OpsTrngO; NATOPS
(b) (6)	7308/7333/6402	:	Stand Inst; FltDutyO

JAMES R. PRIDDY
Lieutenant Colonel, U. S. Marine Corps
Commanding

DISTRIBUTION: "C" plus each individual (1)

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, OPNAVINST
P3750.6E

ENCLOSURE 35

ORIGINAL

MARINE AERIAL REFUELER TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

1/RFKL/rjb
1 Feb 1965

SQUADRON SPECIAL ORDER
NUMBER.....2-65

EXTRACT

3. The following assignments of additional duties are effected

NAME	: EFFECTIVE DATE	: ADDITIONAL DUTIES
Capt (b) (6)	: 1Feb65	: PilotTrngO; NATOPS INST; FDO
(b) (6)	:	:

JAMES. R. PRIDDY
Lieutenant Colonel, U. S. Marine Corps
Commanding

DISTRIBUTION: "C" plus each individual (1)

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, CPNAVINST
P3750.6E

ENCLOSURE 30

ORIGINAL

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

SQUADRON SPECIAL ORDER
NUMBER..... 8-65

EXTRACT

1:WRR:rjb
1 April 1965

1. The following assignments are effected. All previous assignments are revoked.

NAME	:EFFECTIVE DATE:	PRIMARY DUTY	: ADDITIONAL DUTIES
OPERATIONS SECTION	:	:	:
Capt (b) (6)	: 22May64	:Squadron Pilot	: PilotTrngO: NATOPSO: FDO 1Feb65
(b) (6) USMCR 7308/7304	:	:	:

JAMES R. PRIDDY
Lieutenant Colonel, U. S. Marine Corps
Commanding*

DISTRIBUTION "C"

Certified to be a True Copy

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, CPNAVINST
P3750.6E

ENCLOSURE 37

ORIGINAL

MARINE AERIAL REFUELER TRANSFORM SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

1:WHH:gcs
4 June 1965

SQUADRON SPECIAL ORDER
NUMBER.....13.6-65
Rag

EXTRACT

1. The following assignments are effected. All previous assignments are revoked.

NAME	:EFFECTIVE DATE:	PRIMARY DUTY	: ADDITIONAL DUTIES
OPERATIONS SECTION	:	:	:
Capt. (b) (6)	: 25Mar65	: Squadron Pilot	: FDO; Navigation 0 1Apr65; NATOPS 4Jun65
(b) (6) USMC 7308/7305	:	:	:

AUSTIN C. FITZGERALD
Lieutenant Colonel, U. S. Marine Corps
Commanding

DISTRIBUTION "C"

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 6.1, CPNAVINST
P3750.5E

ENCLOSURE (38)

ORIGINAL

MARINE AERIAL REFUELER TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, FMF, Pacific
Fleet Post Office, San Francisco 96601

1:WHH:gs
29 July 1965

SQUADRON SPECIAL ORDER
NUMBER.....13-65

EXTRACT

1. The following assignments are effected. All previous assignments are revoked.

NAME	:EFFECTIVE DATE:	PRIMARY DJTY	: ADDITIONAL DUTIES
OPERATIONS SECTION	:	:	:
Capt (b) (6)	: 25Mar65	: Squadron Pilot	:FDO 1Apr65; NATOPS O 4Jun65
(b) (6) USMC 7308	:	:	:PilotTrng O 1Aug65

W. R. RICE
Major, U. S. Marine Corps
Acting

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 63, CPNAVINST
P3750.6E

ENCLOSURE (39)

ORIGINAL

STANDARD CREW BRIEFING

1. If an emergency condition develops during take-off the pilots prime responsibility will be to maintain control of the aircraft.
 - A. If the emergency arises prior to refusal speed, the first crew member to detect it will immediately call out the exact discrepancy.
The pilot will abort the take-off using reversing and brakes as necessary and the co-pilot will take the yoke.
 - B. If the emergency arises after refusal speed has been reached the pilot will continue to fly the airplane. The first crew member to detect the condition will call out the exact discrepancy and the Aircraft Commander will direct the combating of the emergency. In the case of an engine failure or fire, the affected engine will be feathered only on his command.
2. Co-pilots Normal Take off Responsibilities.
 - A. Keep wings level until pilot takes yoke
 - B. Monitor engine and flight instruments.
 - C. Call out VMC and refusal speed.
3. Flight Engineers Take-Off Responsibilities.
 - A. Monitor the engine instrument and overhead panels.
 - B. Call out board torque as it approaches 16,900'lbs
 - C. Correct any malfunction that would not affect safety of flight if possible and inform pilot of action taken after airborne.
4. When other than normal conditions exist, there must be prior to take off a thorough understanding among all crew members as to their responsibilities.

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(b) (6)

SPINAWAY HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 66, OPNAVINST
P3750.6E

(HANK)

Encl 40

ORIGINAL

GUIDE TO PASSENGER BRIEFING

1. Give greeting, introduce yourself, give name and rank of the Aircraft Commander.
2. Give time enroute and destination weather. Use simple terms to describe the weather, i.e., good, rainy, snowing, etc. Non aviation personnel will not know the significance of terms like 300' and $\frac{1}{2}$ mile in blowing snow, and aviation personnel might become unduly concerned.
3. Give flight altitude and enroute weather, using expected turbulence as the major criterion for good or bad enroute weather. Point out the location of the airsickness bags, emphasizing that they are to be held in readiness at the first sign of airsickness, and that used bags become the personal property of the user.
4. Give the location of all debarkation portals, normal and emergency, and explain that under no circumstances will passengers unlock, tamper with, or open any door unless under the orders of a crewmember. Explain that the First Mech will be stationed in the passenger compartment during all take-offs and landings to assist in the event of an emergency. In the event of emergency debarkation, passengers will leave the aircraft through the nearest available exit. When debarking through the crew entrance door, passengers will give way to crewmembers descending from the flight deck. This is to ensure that crewmembers on their way to combat the emergency have clear passage.
5. Give location of emergency equipment and briefly explain their usage.
6. Give locations of urinals and buttkits, cautioning passengers not to put butts out on the deck. The smoking lamp is out until word has been passed by a crewmember.
7. Depending on flight conditions, passengers will be permitted on the flight deck only with the consent of the Aircraft Commander. No passengers will be permitted on the flight deck during take-offs and landings.
8. When debarking the aircraft via the paratroop doors, walk straight ahead or turn left, but do not turn right until well clear of the aircraft. When debarking via the crew entrance door, right turns are permitted but left turns are forbidden until well clear of the aircraft. This is to preclude walking through a still rotating propellor or through the hot exhaust gasses of the GTC.

NOTE: Ensure that all briefings are conducted with all passengers present and in a place where the above information may be readily heard by all, i.e., not with the GTC running or other airplanes turning up.

REPRODUCED TO BE A TRUE COPY

(b) (6)

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 66, OPNAVINST
P3750.6E

ENCLOSURE (4)

ORIGINAL

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

30 April 1965

FLIGHT SAFETY BULLETIN

It's been quite some time since the publication of my last bulletin, however, the interim period has been a busy one. The squadron flew 1431 hours during March and has passed 1500 hours so far this month. It's not hard to see why the daily APM's are generally sparsely attended. As a result, some of the items discussed in this bulletin have not been mentioned before.

After a comparatively long period of relative quiet, a recent rash of engine shut downs inflight has once more put me back to the desk writing reports. More than likely our increased commitment load is the cause. Under the circumstances I would like to reiterate to all pilots the necessity of conveying all details of an engine shut down inflight or for that matter any unusual incident to me as soon as possible.

The following excerpts are taken from Aircraft, Fleet Marine Force, Pacific Bulletin 3750 of 19 March 1965. I think they are very appropriate for us in our present situation.

a. Times of crisis are requiring rapid transition from readiness to commitment. Amid all the activity and excitement generated as our forces respond to challenge, there is a pervasive requirement for each unit and individual to reappraise his needs, not only in terms of men and material, but also in terms of attitudes and concepts. It is necessary to gear for war across the board - materially, mentally, and spiritually; but in the process, it is important to make sure that everything that is added, changed, or discarded is in fact appropriate to the necessity.

b. There are people whose concept of Aviation Safety is to avoid maximum and minimums, to be inflight operations so cautious that neither man nor machine is ever asked for maximum output. Such people, in avoiding maximum maneuvers and precision minimums, surround themselves with a margin of comfort which they are pleased to call "Safety". When committed to war, stripped of their margin of comfort, they are brought suddenly face-to-face with the stark realization of their own unpreparedness. They who have in times of training and readiness moved carefully within their margin of comfort will pay a heavy price in time of war.

c. There are some people whose concept of Aviation Safety is to pay lip-service to a paper program. In complying with the letter of instruction they miss entirely the intent. They see the program only as a structure of restrictions, designed to slow the pace of training, to distract the focus of readiness, and to demand excessive accounting of "inevitable" mishaps. Such people regard contingency orders as a license to jettison Aviation Safety immediately and entirely. They who believe that the requirements for knowledge in training, responsibility in readiness, and accountability in reporting are to be observed only during peacetime will also pay a heavy price in time of war.

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 68, OPNAVINST
P3750.6E

ENCLOSURE 42

30 April 1965

Recently we have had two incidents involving tachometer generator failure. In both cases the RPM, torque, and T.I.T. gauges indicated a flamed out condition and the engine was immediately feathered. After many discussions with the experts, I have been unable to determine how a failing tach generator could cause an engine to flame out. The possibility exists that system functioning may have returned to normal, except for RPM indication, if the feathering action had been delayed and mechanical governing selected. The proper corrective action for a Tach generator failure is to select mechanical governing on the affected propellor and see if operations returns to normal, if it doesn't, then feather.

Just prior to every take-off we make, one of the last items on the take-off check list is "crew briefing". At this point the co-pilot turns to the pilot and hears almost invariably the following: "VMC is ____ kts, Take-off is ____ kts, standard crew briefing." This is a fine brief as long as a standard crew brief exists. I wasn't quite sure what this briefing was and in trying to find out, I discovered that we don't have one in writing. To correct this situation I have now published and distributed a "Standard Crew Briefing Card". Now when the above briefing is given, everyone concerned will know what is meant. If you haven't received a copy of this brief, please contact me for one. Along the same line, don't let yourself be caught by surprise. Be prepared for that take-off emergency.

It appears that most airports in the Far East have only one runway and its generally oriented 90 degrees to the prevailing winds. At least it seems that way to me because most of our landings are made in crosswind conditions. Recently some pretty stiff winds have been encountered at Futema, how long has it been since you checked the handbook for cross-wind limitations? There are two applicable charts, one for take-offs and one for landings. I think it would behoove all of us to get out the book and review these charts. Note: Although not mentioned on charts, less-than-full flaps improve crosswind handling characteristics.

That's it for the month. I'd like to repeat my request for information on any safety items or unsafe practices that you may observe.

Question: If the NTS system is camed out below flight idle, how is an NTS check accomplished on engine shut-down.

(b) (6)

Aviation Safety Officer

CERTIFIED TO BE A TRUE COPY

(b) (6)

Capt
[Signature]

SPECIAL HANDLING REQUIRED
IN ACCORDANCE WITH
PARAGRAPH 65, CPNAVINST
P3750.6E

ORIGINAL

23 JULY 1965

NOTICE TO FLIGHT CREWS 2-65

OPERATION NOTES

1. CHECK THE "READ AND INITIAL" FOLDER! QUESTIONS:
 - (a) WHAT IS THE MAXIMUM CRUISE TIT?
 - (b) WHAT IS THE MAXIMUM AIRSTART TIT?
 - (c) DID YOU READ "A CHECK IN TIME"? (ACCIDENT PREVENTION BULLETIN 65-6)
 - (d) DOES AN AIRCRAFT PITCH UP OR DOWN IN AN UPDRAFT?
 - (e) DOES THE WEEKLY SUMMARY 21-27 JUNE 65 SUGGEST THAT THE AUTOPILOT BE ENGAGED OR DISENGAGED UPON ENTERING SEVERE TURBULANCE?
 - (f) WHAT PROCEDURES FOR SETTING BRAKES WERE SET FORTH IN THE 13 JULY APM
2. AIRCRAFT SHOW-TIME. ONE HOUR PRIOR TO SCHEDULED TAKEOFF TIME FOR COMMITMENT FLIGHTS ALL PILOTS WILL SHOW AT SQUADRON OPERATIONS FOR COMMITMENT BRIEF, POSSIBLE SPECIAL INSTRUCTIONS AND SIGN FOR THE AIRCRAFT. ONE PILOT WILL THEN FILE AND THE OTHER WILL PROCEED TO AIRCRAFT FOR PREFLIGHT AND SUPERVISE THE LOADING. IN ADDITION ONE PILOT WILL BE PRESENT FOR ALL LOADING AND UNLOADING OPERATIONS AT ALL FIELDS.
3. LOADMASTER. IT IS THE RESPONSIBILITY OF THE LOADMASTER TO SUPERVISE THE LOADING AND UNLOADING OF AIRCRAFT BY AIR FREIGHT. HOWEVER, IN CERTAIN INSTANCES CAUSED BY TIME, LOCATION, AND LOADS, COMPLETE CREW COOPERATION IS NECESSARY. A LACK OF TEAMWORK HAS BEEN NOTICED ON OCCASION AND THIS IS A DIRECT REFLECTION ON CREW CAPABILITY AND THE AIRCRAFT COMMANDER. ONLY THE LOADMASTER WILL OPERATE THE AIRCRAFT LOADING RAMP AND DOOR CONTROLS.
4. NAV. NOTES. THE FOLLOWING ICAO DESIGNATIONS ARE EFFECTIVE 15 JULY 65:
CHU-LAI VVLI VINH LONG VVLG CAM-RANH BAY VNGB
5. VFR FLIGHTS. THE AIR TRAFFIC AT LOW ALTITUDES IN AND AROUND THE DANANG AREA CAN, AT BEST, BE DESCRIBED AS HEAVY. THERE HAVE BEEN NO REPORTED CLOSE CALLS AS YET, AND WITH A SOUND "EYES OPEN" ALERTNESS, NONE ARE EXPECTED. KEEP OVER THE WATER ON COASTAL FLIGHTS AND HIGH ENOUGH TO AVOID CHOPPERS, BOATS, OTTERS, ETC.
6. TIRE CHANGES. ALL TIRE CHANGES WILL BE WRITTEN UP ON THE YELLOW SHEET AND THE OLD TIRE WILL BE RETURNED TO IWAKUNI ON SAME AIRCRAFT.
7. AIRCRAFT CLEANLINESS. THE FLIGHT ENGINEER IS HELD RESPONSIBLE FOR THE CLEANLINESS OF THE AIRCRAFT. HE SHALL DIRECT SUCH ENLISTED FLIGHT CREW PERSONNEL AS NECESSARY TO EFFECT THE CLEANING OF THE ENTIRE INTERIOR. THE COCKPIT IS NOT TO BE OVERLOOKED.

ENGINEERING NOTES

1. HARD LANDINGS: CAMI-32-63
TECH ORDER 8-66 IS STILL IN FORCE REQUIRING A THOROUGH VISUAL INSPECTION OF ANY UNUSUALLY HARD LANDINGS. THE SLIGHTEST DAMAGE FOUND VISUALLY SHOULD BE REPORTED ON THE "B" SHEET SO MAINTENANCE CAN FOLLOW UP.
2. IFR HOSE EXERCISE: CAMI-18-64
WE ARE STILL REQUIRED TO EXERCISE THE IFR HOSES AT LEAST ONCE A WEEK, 3 TIMES OUT AND IN, AND A RESPONSE CHECK. MAKE AN ENTRY ON THE "B" SHEET WHEN EXERCISED SO MAINTENANCE CAN KEEP A RECORD. IF THERE ARE DOUBTS AS TO WHETHER HOSES WILL MAINTAIN FUNCTION AND SPOIL YOUR TRIP WE SUGGEST DOING IT ON THE RETURN LEG TO IWAKUNI.

SPECIAL HANDLING REQUIRED in accordance with PARA 66, OPNAV INST F3750.6E

ENCLOSURE (43)

ORIGINAL

VMGR-152 148 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

SAFETY OFFICERS CORNER

AT THE END OF FY-1965 WE HAD ACCUMULATED A TOTAL OF 48,248 ACCIDENT FREE HOURS. THIS IS AN ENVIABLE RECORD AND I EXPECT TO SEE IT GROW AND GROW. IT WON'T JUST HAPPEN, HOWEVER, IT TAKES A MARKED EFFORT ON THE PART OF ALL FLIGHT CREW MEMBERS TO CONTINUE TO OPERATE IN ACCORDANCE WITH APPROVED PROCEDURE, AND TO OBSERVE ALL SAFETY PRECAUTIONS. DURING THE PAST FOUR MONTHS WE HAVE NEARLY DOUBLED OUR MONTHLY FLIGHT TIME AND IN MANY INSTANCES A NOTE OF URGENCY OR HASTE HAS BEEN CONNECTED WITH OUR MISSION. KEEP IN MIND THAT THIS IS NOT THE TIME TO DISCARD ALREADY ESTABLISHED SAFETY AND OPERATING PROCEDURES BUT RATHER A TIME TO USE THEM EVEN MORE THAN BEFORE.

THE FOLLOWING ITEMS HAVE COME TO OR BEEN BROUGHT TO MY ATTENTION RECENTLY AND I'LL TAKE THIS OPPORTUNITY TO PASS THEM ON TO YOU.

1. INTERSECTION TAKEOFFS. I HEARD A STATEMENT A FEW YEARS AGO THAT WENT: "THE THREE MOST USELESS THINGS IN THE WORLD TO AN AVIATOR ARE (1) THE ALTITUDE ABOVE YOU, (2) THE AIRSPEED THAT YOU DON'T HAVE, AND (3) THE RUNWAY BEHIND YOU". IMAGINE THE EMBARRASSMENT YOU'D FEEL SITTING IN THE WEEDS 300' OFF THE END OF THE RUNWAY AFTER ABORTING FROM AN INTERSECTION TAKEOFF. BY NOT TAKING ADVANTAGE OF THE FULL RUNWAY AVAILABLE YOU VIOLATE THE RULES OF GOOD AIRMANSHIP. GRANTED, THERE ARE INSTANCES IN OUR TYPE OF FLYING WHERE THIS ISN'T FEASIBLE (i.e. RUNWAY 35 AT DANANG) BUT THEY ARE FEW AND FAR BETWEEN.
2. TAIL SKAG. DURING A RECENT OPERATION AT DANANG, A PILOT, ON PRE-FLIGHTING HIS AIRCRAFT DISCOVERED THAT THE TAIL SKAG HAD BEEN DRAGGED. ALTHOUGH HE DIDN'T KNOW WHEN IT HAPPENED, BY REVIEWING THE PREVIOUS DAYS LANDINGS AND TAKEOFFS HE NARROWED IT DOWN TO A TAKEOFF FROM HUE PHU BAI. AS HE WAS ROTATING THE NOSE, THE AIRCRAFT ENTERED A DIP IN THE RUNWAY WHICH CAUSED THE OLEOS TO COMPRESS PRIOR TO THE AIRCRAFT BOUNCING PREMATURELY INTO THE AIR. MANY OF THE RUNWAYS WE OPERATE FROM ARE ROUGH AND HAVE NUMEROUS DIPS SO THE ONLY APPARENT WAY TO AVOID INCIDENTS OF THIS NATURE IS TO UTILIZE A FLAT TAKEOFF ATTITUDE.
3. SUNGLASSES. NOT ONLY ARE SUNGLASSES GREAT EYE SAVERS AND WRINKLE PREVENTORS, THEY ARE ALSO A USEFUL AID IN THE PREVENTION OF MID-AIR COLLISIONS. EVEN THOUGH THEY REDUCE THE MAXIMUM DISTANCE AT WHICH OTHER AIRCRAFT MAY POSSIBLY BE DETECTED, THEY COMPENSATE FOR THIS BY REDUCTION OF GLARE, LESSENED EYE STRAIN AND GREATER COMFORT WHICH MAY YIELD GREATER ACTUAL DETECTION DISTANCE OVER EXTENDED PERIODS OF FLIGHT. SUNGLASSES SHOULD BE WORN ANY TIME YOU'RE FLYING IN THE GLARE AT HIGH ALTITUDE OR ON CLEAR SUNNY DAYS. THEY SHOULD NOT BE WORN FLYING IN DIMLY LIT AREAS SUCH AS IN OR UNDER AN OVERCAST OR AT TWILIGHT.
4. CIGARETTE LIGHTERS. BEWARE OF PLASTIC RESERVOIR TYPE CIGARETTE LIGHTERS. THIS IS THE TYPE THAT DOESN'T CONTAIN ANY COTTON OR WOOL PACKING. THE REDUCED PRESSURE AT ALTITUDE CAUSES THEM TO LEAK FREELY. ONE AIRLINE PASSENGER RECENTLY TRIED TO LIGHT HIS CIGARETTE WITH ONE AND ENDED UP WITH A HANDFUL OF FLAMES.
5. INCIDENTS. I'D LIKE TO REPEAT MY REQUEST ONCE MORE THAT YOU GIVE ME THE DETAILS EVERYTIME YOU SHUT DOWN AN ENGINE IN FLIGHT BECAUSE OF LOSS OF POWER OR AS A PRECAUTIONARY MEASURE. I WOULD ALSO APPRECIATE HEARING ABOUT ANY OTHER INCIDENTS INVOLVING FLIGHT SAFETY, THAT YOU MAY EXPERIENCE. REMEMBER THAT "SAFETY" IS EVERYBODY'S BUSINESS AND WHEN YOU OBSERVE AN UNSAFE PRACTICE THE BEST COURSE OF ACTION IS TO CORRECT IT ON THE SPOT.
6. DRINKING AND FLYING. A BLOOD CONCENTRATION OF 0.05% ALCOHOL IS USUALLY PRODUCED BY TWO OUNCES OF WHISKEY OR 1 1/2 CANS OF BEER. IT TAKES FIVE HOURS TO WORK THIS MUCH ALCOHOL OUT OF YOUR SYSTEM. EVEN THIS SMALL CONCENTRATION HAS A DEFINITE EFFECT ON THE HIGHER MENTAL FACILITIES. ANYONE WITH THE MATURITY OF A PILOT OR CREW MEMBER KNOWS ABOUT THE EFFECTS OF ALCOHOL. NOT ALWAYS APPRECIATED ARE THE FACTS THAT: ALCOHOL WORKS LIKE A DEPRESSANT NOT A STIMULANT; IT IMPAIRS JUDGEMENT AND PROVIDES RELEASE FROM NORMAL INHIBITIONS. THE PERSON WHO IS DOING THE DRINKING IS THE WORST JUDGE OF ITS EFFECTS UPON HIMSELF AND HIS FITNESS TO FLY.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.68

(b) (6)

ENCLOSURE (43)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: [REDACTED]

17 June 1965

NOTICE TO FLIGHT CREWS

OPERATIONS NOTES

1. AIRCRAFT COMMANDERS

THE SITUATION SOUTH IS EVER CHANGING AND THE C.O. HAS PASSED THE WORD FOR EACH OF YOU IN ADDITION TO YOUR REGULAR DUTIES TO LOOK AROUND. COMMUNICATIONS ARE A CONSTANT PROBLEM. IF YOU SPOT PROBLEM AREAS THAT AFFECT THE SQUADRON OVERALL EFFICIENCY I.E., BILLETING - AIR FREIGHT - TRANSPORTATION. WRITE IT DOWN AND BRING IT HOME.

2. VIP FLIGHTS

CREW MEMBERS SCHEDULED TO FLY THE CG, A'SST CG WILL REPORT TWO HOURS PRIOR TO TAKEOFF AND ASCERTAIN THE AIRCRAFT IS IN AN UP STATUS. WE WANT NO REPETITION OF THE CG EMBARKING ONLY TO FIND A DELAY DUE TO AIRCRAFT DEFICIENCIES.

3. STANDBY AIRCRAFT CREW MEMBERS

A BEER FOR DINNER IS NOT THE ORDER OF THE DAY. NO DRINKING IF SCHEDULED FOR STANDBY AIRCRAFT.

4. CO-PILOTS

AIRCRAFT COMMANDERS ARE NOT DOING THE CREW MEMBERS ANY FAVOR BY GLOSSING OVER THEIR ERRORS. THIS INCLUDES ON THE GROUND AND IN THE AIR. CALL A SPADE A SPADE AND YOU WILL BE SURPRISED HOW THAT YOUNG FELLOW SHAPES UP.

5. AIRCRAFT TOWING

AT DANANG A PRE-FLIGHT CHECK WILL PREVENT AN EMBARRASSING INCIDENT. THE FLIGHT ENGINEER OR 1ST MECHANIC WILL SUPERVISE THE TOWING OF HIS AIRCRAFT.

6. LOGGING APPROACHES, INSTRUMENTS, PILOT TIME, ETC. IN DETERMINING WHETHER TO LOG AN APPROACH IS ACTUAL OR SIMULATED THERE ARE NO CUT AND DRIED RULES. IT'S AN ACTUAL APPROACH FOR SURE IF YOU BREAK OUT AT MINIMUMS BUT HOW ABOUT WHEN YOU BREAK OUT AT 600 FEET? OR 1000? HOW YOU LOG IT IS UP TO YOU BASED ON WHAT YOU FEEL YOU GAINED IN EXPERIENCE, OTHER THAN CLIMBING THE CREW LADDER. BUT BE REALISTIC.

IN LOGGING PILOT TIME, LOG ONLY THE TIME YOU EARNED. IF YOU'VE GIVEN UP YOUR SEAT TO A VISITING FIREMAN (QUALIFIED OF COURSE), HIS SEAT TIME DOESN'T GO IN YOUR LOG BOOK.

HOURS OF FLIGHT TIME, INSTRUMENT TIME, ETC, ARE A MEASURE OF EXPERIENCE. THESE DATA ARE MADE A MATTER OF RECORD SO THAT OTHERS MAY JUDGE PERFORMANCE AND CAPABILITY. A FAT LOG BOOK IS A THING TO BE DESIRED BY ALL RED BLOODED AVIATORS BUT TO MISREPRESENT YOURSELF IS UNFAIR TO ALL CONCERNED AND PRIMARILY YOURSELF. AS P. T. BARNUM SAID: "YOU CAN FOOL SOME OF THE PEOPLE ALL THE TIME, ALL OF THE PEOPLE SOME OF THE TIME, BUT NOT ALL THE PEOPLE ALL THE TIME." DON'T FOOL YOURSELF, DEAL FROM THE TOP OF THE DECK.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

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ENCLOSURE (44)

(b) (6)

(NAME)

(NAME)

ORIGINAL

VMOR-152 AAR 1-55A Involving KC-130F BUNO 149802 occurring 24 August 1965

Pilot: (b) (6)

7. SHORT FIELD PROCEDURES. DURING THE PAST YEAR WE'VE GONE INTO FIELDS OF ~~LESS~~ THAN 8000 FEET ONLY A COUPLE OF TIMES. LOOKING INTO THE FUTURE A BIT, WE WILL MOST PROBABLY BE CALLED ON TO OPERATE AS THE AIRCRAFT WAS DESIGNED, ON UNPREPARED, SHORT FIELDS. THERE ARE FEW OF US WHO COULD RIGHT NOW PUT THIS THING INTO A 2000 FOOT STRIP THE FIRST TRY. SINCE THE SECRET TO A SHORT ROLL LANDING IS IN TOUCHING DOWN ON A PREDETERMINED SPOT IS A BETTER TEST OF PILOT SKILL THAN IS A GREASED ON LANDING SOMEWHERE BETWEEN THE 1000 FOOT AND 3000 FOOT MARKERS. IF YOU CAN COMBINE THESE YOU'RE A PRO.

8. HOT WEATHER TAKEOFFS. REQUIRES A LITTLE EXTRA THOUGHT. IT'S A LOT EASIER TO FIGURE, STATISTICALLY AT THE END OF THE RUNWAY, IF YOU CAN MAKE IT, RATHER THAN HALFWAY DOWN THE RUNWAY GOING NEARLY FAST ENOUGH.

9. DIVERTED FLIGHTS. IF YOU MUST VARY FROM THE BRIEFED ITINERARY, RECORD THE CHANGES ON THE BRIEF SHEET WITH APPROPRIATE COMMENTS AND RETURN TO THE FDO. IT HELPS US KEEP TRACK OF WHAT YOU ACCOMPLISHED.

10. FLAPS UP AT DANANG ON THE MARINE RAMP. THE PROP BLAST KICKS UP MORE DIRT WHEN THE FLAPS DIRECT PART OF THE FLOW DOWN.

11. BITES. ONCE UPON A TIME (TRUE STORY) THERE WAS A MAN WHO GOT A SILVER UNDER HIS THUMB NAIL. IT HURT LIKE BLUE BLAZES, BUT BEING A MAN, HE DIDN'T SEE A DOCTOR. AS TIME PASSED, HIS THUMB BECAME SWOLLEN, BLUE, AND HURT MORE. BUT, BEING A MAN, HE BORE THE PAIN AND REFUSED TO SEE A MEDIC. TO SHORTEN THE TALE, HE DIED. HAD HE ENDURED THE PRIOR PAIN OF A TETANUS SHOT HE WOULD HAVE SAVED A GREAT DEAL MORE PAIN PLUS HIS LIFE.

HAD WATER IS A PRIME WEAPON OF A SNEAKY ENEMY AND ONE OF THE EASIEST UTILIZED. CHOLERA AND TYPHOID SHOTS ARE PART OF YOUR PROTECTION. SAVE THE BEST OF US THE EMBARRASSMENT OF SQUABBLING OVER YOUR CARCASS TO CONUS. GET YOUR SHOTS.

12. MODE/CODE. MAKE SURE YOU ARE SQUAWKING THE CORRECT MODE AND CODE GOING TOWARD RVN. SAVE THE FLEET THE EFFORT OF AN INTERCEPT. IF YOU DO GET INTERCEPTED, TRY TO PASS THE WORD BACK TO ANCHORAGE BASE ASAP WITH THE TIME AND EXACT LOCATION.

13. AWAKE. "DUE TO POSSIBLE SMALL AIRS FINE, PILOTS ARE CAUTIONED NOT TO DISOBEY DELOW TRAFFIC PATTERN ALTITUDE UNTIL ESTABLISHED ON FINAL APPROACH. FINAL APPROACH SHOULD BE AS STEEP AS POSSIBLE CONSISTENT WITH SAFETY" (RESCUE SUPPLEMENT, DANANG) WHEN YOU ARE IN THE RIGHT SEAT DURING ONE OF THESE APPROACHES ARE YOU MENTALLY PRIMED TO TAKE CONTROL? A HIT IN THE COCKPIT IS JUST AS LIKELY A SPOT AS ANY OF THE OTHER ONES WE'VE TAKEN. BE PREPARED FOR THE WORST SITUATION YOU CAN DREAM UP.

14. RUSHING PROCEDURES. DON'T BE STAMPEDED INTO ACTING BEFORE YOU'RE READY. FOR EXAMPLE, GETTING AIRBORNE REQUIRES A CERTAIN AMOUNT OF TIME. IF YOU SHORTEN IT, YOU SKIMP ON THE CHECK LIST, GUM BRIEF, OR SOME OTHER FACET OF SAFETY. DON'T BE THE TALK OF THE TOWN FOR AN AVOIDABLE BOO BOO.

15. WX PENETRATION. RADAR CAN SAVE YOU A LOT OF KNOCKS. YOU CAN SAVE THE RADAR A LOT OF KNOCKS. IF YOU DO GET INTO A DANGER OR AN AREA OF HAIL, SLOW DOWN TO YOUR PENETRATION SPEED AND SAVE THE RADAR AS MUCH AS YOU CAN. ALSO IF YOU HAVE TO MARCH INTO SOME OF THOSE WHITE AREAS ON THE SCOPE, THE TIME TO SLOW DOWN IS BEFORE.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OMAV INST P3750.6B

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(b) (6)

ENCLOSURE (44)

(b) (6)

(b) (6)

ORIGINAL

VHGR-150 AIR 4-65A involving KC-130F BUHO 149802 occurring 24 August 1965
Pilot: (b) (6)

16. CREW DUTY TIME. ACCORDING TO THE NATOPS MANUAL AND THE WING ORDER 4631.7, A BASIC CREW, OR NORMAL CREW, WILL NOT BE SCHEDULED FOR MORE THAN 18 HOURS. WELL NOW, DUE TO THE CURRENT SITUATION THIS IS BEST OCCASIONALLY. SO, KEEP IN MIND THAT EVEN THOUGH YOU KEEP YOURSELF AWAKE ON COFFEE, YOUR RAZOR SHARP MIND DEVELOPS NICKS AND YOUR SUPERIOR REFLEXES TEND TO GET A BIT SPASTIC. YOU MUST CONCENTRATE MUCH MORE ON YOUR ACTIONS AS THE FLIGHT PROGRESSES. FINALLY, WHEN THINGS REACH A POINT WHERE THE SAFETY OF FLIGHT IS COMPROMISED, THE AG, IN ALL COMMON SENSE, MUST CALL A HALT. THIS CAN BE A DIFFICULT DECISION. NO ONE LIKES TO HOLLER UNCLE WHEN THE MAIL MUST GO THROUGH. BUT KEEP IN MIND THAT YOU HAVEN'T FURTHERED THE EFFORT IF YOU BLOW A TIRE OR TAXI INTO A POST DUE TO EFFICIENCY BEING IMPAIRED BY FATIGUE. THEN WE HAVE TO CORRECT ANOTHER AIRCRAFT TO FINISH YOUR MISSION. BETTER A LITTLE LATE THAN A LOT LATE, OR NEVER.

PEOPLE MAY PUSH YOU BUT YOU ARE IN COMMAND AND YOUR LITTLE DETACHMENT AN SO, ARE THE ONE BEST QUALIFIED TO JUDGE ITS CAPABILITIES. NO ONE CAN ORDER YOU TO CONTINUE THE MARCH AGAINST YOUR JUDGMENT EXCEPT THE SQUADRON CO, GROUP CO, OR OTHER COMMANDER IN TACTICAL COMMAND EMBARKED OR A FLAG OR GENERAL OFFICER, ELIGIBLE FOR COMMAND AT SEA, EMBARKED. LET COMMON SENSE PREVAIL AND REMEMBER THAT AFTER ALL THE SMOKE HAS SETTLED, THE FINAL RESPONSIBILITY LIES WITH AG IN COMPLETING THE MISSION SAFELY.

17. FAMILIARITY BREEDS CONTEMPT. BY NOW, MOST OF US HAVE RUN UP QUITE A BIT OF TIME IN THE C-130; SOME OF US HAVE FLOWN PRACTICALLY NOTHING ELSE. WE CAN GET OUT OF ANY MESS WE OURSELVES GET INTO, RIGHT? WRONG! (OR AT LEAST, MAYBE) THE WEEKLY SUMMARY OF AIRCRAFT ACCIDENTS AND GRANDPAP PITTINCHIE BEAR OUT THE FACT THAT WELL QUALIFIED AND EXPERIENCED PILOTS OFTEN PULL STUPID STUNTS. ARE WE ANY DIFFERENT? WE LIKE TO THINK SO, BUT WE'RE ALL OUT OF THE SAME CLOTH. WE'RE HUMAN THAT IS AND TO ERR IS HUMAN AND ALL THAT STUFF.

YOU MAY GET A RIDDING AT HAPPY HOUR FOR WAVING OFF OR NOT GETTING INTO PUTIMA. BUT THINKING MEN WILL BE RIDDING YOU FOR GETTING YOURSELF INTO THE POSITION OF HAVING TO GO AROUND, NOT THE GO AROUND ITSELF. FOR THIS YOU WILL BE APPLAUDED. DISREGARD WHAT THOSE NON-THINKING ONES THINK. DON'T LET PRIDE RULE YOUR COMMON SENSE.

18. STANDBY. IN MANY CASES THE LAUNCHING OF THE STANDEY IS A MATTER OF LIFE AND DEATH FOR SOMEONE. YOU HAVE A LOT OF SLEEPLESS NIGHTS IN STORE FOR YOU IF THE FLIGHT WAS DELAYED BECAUSE YOU COULDN'T BE REACHED AND THE PATIENT DIED. MINUTES COUNT SO KEEP THE FDO/SO CURRENT ON YOUR WHEREABOUTS MEMOR- TARILY AND DON'T GET TOO FAR AWAY.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

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(b) (6)

ENCLOSURE (44)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

5 May 1965

GENERALLY SPEAKING, FUEL CONSUMPTION DECREASES WITH AN INCREASE IN ALTITUDE. THIS WOULD SEEM TO MAKE FLIGHT PLANNING SIMPLE - YOU JUST GO AS HIGH AS YOU CAN AND YOU'LL NEED THE LEAST FUEL. BUT NOTHING IS EVER THIS SIMPLE; YOU ALWAYS HAVE A WIND THAT IS EITHER HELPING OR HINDERING.

GENERALLY WHEN A PILOT FILES A FLIGHT PLAN, AS HE IS BRIEFED ON THE WEATHER AND IS ASKED WHAT ALTITUDE HE IS GOING, HE SELECTS AN ALTITUDE, USUALLY OFF THE TOP OF HIS HEAD, BEFORE HE KNOWS (1) HIS AIRCRAFT WEIGHT, AND (2) THE WINDS. FOR OBVIOUS REASONS, AIRCRAFT WEIGHT LIMITS ALTITUDE. ALSO FOR OBVIOUS REASONS, WINDS DETERMINE THE ALTITUDE. IN DETERMINING THE BEST ECONOMICAL ALTITUDE, RELATIVE TO THE WINDS, YOU MUST INSPECT THE CHARTS; A TEDIOUS, TRIAL AND ERROR PROCEDURE.

BELOW IS A TABULATION FROM THE CHARTS BASED UPON A 500 MILE TRIP, A 130,000 POUND AIRCRAFT, 290 TAS, STANDARD DAY - NOT TO BE CONFUSED WITH AN AVERAGE DAY. (CORRECTIONS FOR NON-STANDARD DAY: +10°C = -3% TAS, -8% FUEL FLOW, +5% MILES/POUND FUEL) ALLOW A COUPLE PERCENT ERROR FOR EYEBALL AND COMPUTER ACCURACY AND REMEMBER THAT THIS CHART IS ONLY FOR A SPECIFIC CONDITION AND THE OBJECT IS TO SHOW A RELATIONSHIP BETWEEN WIND AND ALTITUDE. THE TIME AND FUEL FOR CLIMB ARE INCLUDED IN THE TOTALS:

WIND		-100K	-75K	-50K	-25K	0 K	
G/S		190K	215K	240K	265K	290K	
<u>10,000 FEET</u>							
TIT	845°	TIME	2:39	2:21	2:06	1:55	1:46
FUEL FLOW	5720	FUEL	15050	13650	12200	11150	10300
		GROUND/1000					
		MILES/LB FUEL	33.3	37.8	42.0	46.3	50.8
<u>15,000 FEET</u>							
TIT	850°	TIME	2:39	2:21	2:07	1:56	1:47
FUEL FLOW	5040	FUEL	13350	12150	11000	10100	9000
		GROUND/1000					
		MILES/LB FUEL	37.7	42.7	47.7	52.7	57.7
<u>20,000 FEET</u>							
TIT	860°	TIME	2:38	2:22	2:09	1:58	1:49
FUEL FLOW	4500	FUEL	12300	11100	10000	9150	8600
		GROUND/1000					
		MILES/LB FUEL	42.1	47.7	53.2	58.7	64.2
<u>25,000 FEET</u>							
TIT	890°	TIME	2:42	2:26	2:13	2:03	1:55
FUEL FLOW	4100	FUEL	11600	10500	9600	8900	8350
		GROUND/1000					
		MILES/LB FUEL	46.1	52.3	58.2	64.5	70.5

NOTICE THE OUTLINED FIGURES. THESE ARE SITUATIONS OF PRACTICALLY CONSTANT FUEL AND GROUND MILES PER 1000 POUNDS OF FUEL. NOTICE ALSO THAT THE FUEL BREAK EVEN POINT SEEMS TO BE 5000 FEET FOR 25 KNOTS OF WIND; THAT IS, THE FUEL USED AT 10,000 FEET WITH 25 KNOTS HEADWIND IS THE SAME AS 15,000 FEET WITH 50K HEADWIND; IS THE SAME AS 20,000 FEET WITH 75K HEADWIND; IS THE SAME AT 25,000 FEET WITH 100K HEADWIND. NOW NOTICE THE TIME; AT 10,000 FEET THE TRIP WOULD TAKE 1 HOUR AND 55 MINUTES, AT 25,000 FEET, 47 MINUTES LONGER.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

ORIGINAL

VMGR-152 AAB 1-65A involving KC-130F BUHO 149802 occurring 24 August 1965
Pilot: (b) (6)

OBVIOUSLY, IN THIS WIND SITUATION, THE BEST ALTITUDE FOR THIS TRIP WOULD BE 10,000 FEET (EXCLUDING ICING, TURBULENCE ETC). BOILED DOWN - THIS MEANS THAT IF YOU CAN REDUCE YOUR HEADWIND COMPONENT 25K BY GOING 5,000 FEET LOWER YOU WILL GAIN IN TIME AT NO INCREASE IN FUEL. (10,000 FEET IS USED AS A BASE ALTITUDE IN THAT 290 KTAS NORMALLY DOESN'T EXCEED 250 KTAS).

THERE IS ANOTHER BONUS TO CONSIDER. NOTICE THAT BY GOING AT 10,000 FEET VICE 25,000 YOU'VE NEEDED 45° LESS TIT, THUS SAVING WEAR AND TEAR ON THE ENGINE.

THIS BRINGS UP ANOTHER FACET OF ECONOMY. STATED SIMPLY, A JET ENGINE DEFEYES ITS THRUST BY EXPANDING AIR BY HEAT. AS AIR DENSITY DECREASES, THE CORRECT COMBUSTION MIXTURE REQUIRES LESS FUEL AND CONSEQUENTLY LESS FUEL CONSUMPTION. HOWEVER, THE SAME LOW AIR DENSITY GIVES LESS LIFT TO YOUR WINGS AND LESS EFFICIENCY TO YOUR PROP SO FOR A GIVEN SPEED YOU MUST HAVE MORE POWER, OR IN OTHER TERMS, MORE TIT.

SUPPOSE YOU GO FROM POINT A TO POINT B AT FL240 REQUIRING 880° TIT, AND THEN DECIDE TO ECONOMIZE AND GO TO FL290, SAVING 200 POUNDS FUEL FLOW THOUGH REQUIRING 930° TIT. YOU MAY SAVE ABOUT 30 GALLONS OR \$3.00 AN HOUR AND IN A YEAR'S TIME YOU MAY SAVE 3 OR 4,000 DOLLARS OF FUEL MONEY. BUT, IF ONE ENGINE HAS TO BE CHANGED FOR HOT SECTION DAMAGE DUE TO HIGH TEMPERATURES YOU WOULD NEGATE THIS YEARLY SAVINGS ABOUT 10 TIMES OVER. NOT ONLY IS MONEY INVOLVED BUT TIME - EXTRA FOR MAINTENANCE AND A LOSS FOR OPERATIONS. TRUE ECONOMY IS A COMPROMISE.

SINCE A JET ENGINE GORBELES FUEL AT A PRODIGIOUS RATE IT DOESN'T TAKE MUCH OF A MISCALCULATION TO PUT YOURSELF IN A PINCH. THIS SHOULD BE A SIMPLE THING JUST FILL ALL THE TANKS AND FLY SHORT HOPS. BUT, IN FIGURING YOUR FUEL LOAD YOU MUST KEEP IN MIND THAT PRIMARILY YOU HAUL PEOPLE AND THINGS, NOT JUST TOTE FUEL AROUND THE COUNTRYSIDE (REFUELING MISSIONS EXCEPTED OF COURSE), AND SOMETIMES YOU MUST FLY PLACES QUITE DISTANT, REQUIRING A GOODLY AMOUNT OF FUEL. AT THIS TIME CARE MUST BE EXERCISED IN FIGURING THESE FUEL REQUIREMENTS.

THERE ARE NO END OF WAYS TO COME OUT SHORT OF FUEL (1) TYPHOONS WANDER UP FROM NOWHERE. (2) HOMOTRONS IN THE WEATHERMAN'S TELETYPE. (3) PILOT COUNTED THUMB TWICE CALCULATING FUEL. (4) GAVE AWAY TOO MUCH FUEL TO SOME GREEDY RECEIVER. (5) UNFEATHERABLE FAILED ENGINE. (6) AIRPLANE PRESSURIZATION LET LOOSE A LONG WAY OUT - JUST A FEW.

BUT, IF THE UNTHINKABLE HAPPENS TO YOU, HERE IS ANOTHER CHART WHICH MAY GIVE AN IDEA OF HOW YOU CAN GET THE BEST FROM WHAT FUEL YOU HAVE.

AGAIN, ALLOW A FEW PERCENT ERROR AND NOTICE THAT THE 5,000 FEET AND 25K WIND RELATIONSHIP SHOWS UP HERE ALSO. THE FIRST FIGURES ARE FOR FOUR ENGINE OPERATION, THE FIGURES IN PARENTHESES ARE FOR TWO SYMMETRICAL ENGINE OPERATION UP TO AND INCLUDING 10,000 FEET AND THREE ENGINES FROM 15,000 FEET UP. THE ASTERISK DENOTES MAX CONTINUOUS POWER REQUIRED.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

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ENCLOSURE (45)

(b) (6)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUNO 119802 occurring 24 August 1965
Pilot: (b) (6)

THIS HAS BEEN FOR HEADWIND CONDITIONS WHICH ARE THE WORST SITUATIONS. WITH A TAILWIND YOU ARE USUALLY BETTER OFF CLIMBING, IF THE WINDS GET STRONGER OR MORE TAILWISE WITH ALTITUDE. BUT- TAKE NOTHING FOR GRANTED- LOOK INTO THE GRAPHS.

AIRCRAFT LOADING. WITH THE STEPPED UP OPERATIONS OF LATE THE POWERS THAT BE ARE GREATLY INTERESTED IN THE MAXIMUM UTILIZATION OF THE KC-130. WE ALL ARE MAINLY CONCERNED WITH THE SAFETY OF THE LOAD, THE WEIGHT AND BALANCE AND THE TIE DOWN ADEQUACY. WE CAN ADDITIONALLY HELP THE EFFORT BY PAYING ATTENTION TO THE EFFICIENCY OF THE LOAD. FOR EXAMPLE: COULD SOME PALLETS HAVE BEEN STACKED? COULD YOU HAVE DIVIDED THE HEAVY STUFF FORE AND AFT SO YOU COULD STILL USE THE WHEEL SELL SEATS? COULD YOU LOAD AN EXTREMELY WIDE OBJECT SLIGHTLY OFF CENTER SO YOU ONLY LOSE SEATS DOWN ONE SIDE INSTEAD OF BOTH? ALSO, IN TRYING TO KEEP OUR GROUND TIME AT A MINIMUM WE TEND TO RUSH THINGS AND TAKE SHORT CUTS. THE SAVINGS IN TIME IS ALL FOR NAUGHT IF THE RAMP GETS CLOSED ON THE ROLLERS OR A CHAIN, A FORK-LIFT SCARS THE DOOR OR SOMEONE GETS A FOOT MASHED. TEMPER YOUR HURRY WITH COMMON SENSE.

TAXIING. JUST LIKE VD, EVERY SO OFTEN A REMINDER TO SLOW DOWN ON THE GROUND HAS TO BE MADE. THE AIR FORCE STARTED SOMETHING WHEN THEY INITIATED SPORTS CAR RACING AT AIRBASES. UNTIL YOU SEE BALES OF STRAW AT THE TURNS KEEP YOUR TAXI SPEED DOWN TO A FAST WALK.

ATC. THE CAPABILITY OF HOME BASE HAS BEEN REDUCED OF LATE. THERE WILL BE NO MORE RADAR APPROACH CONTROL UFN. EXPECT DELAYS AND HOLDING WHEN IFR. CONTINUE TO BE UNDERSTANDING AND COURTEOUS WITH ATC. EVERYONE HAS THEIR PROBLEMS THESE DAYS; THE GEARS HAVE A LITTLE SAND IN THEM NOW - DON'T CONTRIBUTE A MONKEY WRENCH.

KAA'S. IF YOU LOSE A CLASSIFIED DOCUMENT, SOME PEOPLE RECOMMEND SUICIDE, SOME DESERTION, SOME HUCK PASSING. THE BEST RECOMMENDATION IS CARE.

LANDING WEIGHTS. THE HANDBOOK RECOMMENDS A NORMAL LANDING GROSS WEIGHT OF 118,000 POUNDS. WHEN YOU LAND AT OVER 118,000 YOU HAVE, IN EFFECT, COMMITTED YOURSELF TO A BETTER THAN AVERAGE LANDING. IN UNUSUAL SITUATIONS CONSIDER DUMPING FUEL TO REDUCE YOUR WEIGHT IF THERE IS SOME DOUBT AS TO GETTING ABOARD SMOOTHLY. DON'T FORGET ALTERNATE FUEL REQUIREMENTS AND REMEMBER THAT DUMPING FUEL IN A CONTROL AREA IS SUBJECT TO GROUND CONTROL (EXCEPT IN AN EMERGENCY).

NEW BRIEF SHEET. THIS IS A LITTLE MORE COMPREHENSIVE THAN THE OLD. IT'S SELF-EXPLANATORY FOR THE MOST PART. ON THE BACKSIDE IS AN OUTBOUND AND INBOUND CHECK LIST TO AID THE PILOT IN REMEMBERING TO DRAW AND TURN IN KAA'S, FILL OUT CO-PILOT'S COMMENT SHEET, ETC. IF THE AC HAS ANY GRIPEES OR RECOMMENDATIONS ON THE FLIGHT THERE IS A SPOT FOR THAT. BE CONSTRUCTIVE.

LOGGING APPROACHES. IF YOU NOTICE THE FINE PRINT ON THE YELLOW SHEET, IT STATES THAT THE TIME FINAL APPROACH WILL BE LOGGED IN THE APPROACH BLOCK. IF A PENETRATION WAS INVOLVED PREFIX THE APPROACH WITH A "J". THE APPROACH IS FROM THE LOW STATION TO THE FIELD OR THE GATE INBOUND. ALL THAT OTHER MICKEY MOUSE IS JUST MANEUVERING TO GET YOU INTO POSITION FOR THE FINAL APPROACH. FOR EXAMPLE: A TACAN PENETRATION FROM THE 360/184° RADIAL NEW WITH A GCA FINAL WILL BE LOGGED AS A "JG". IF YOU FLY THE TACAN ALL THE WAY TO THE FIELD IT WILL BE A "JT".

LOGGING NIGHT TIME. THERE HAVE BEEN MANY FLUCTUATIONS IN REGARDS TO LOGGING NIGHT TIME DUE TO A LETTER OF A COUPLE OF YEARS AGO, WHICH IMPLIED AN IMPENDING CHANGE TO THE LOGGING PROCEDURES. THIS CHANGE HAS NOT BEEN FORTHCOMING AND THE CURRENT DOCUMENT, DATED MARCH 1964, PROVIDES FOR THE LOGGING

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

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(b) (6)

ENCLOSURE (15)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUNO 119802 occurring 24 August 1965

Pilot: (b) (6)

OF NIGHT INSTRUMENTS AND NIGHT VFR. ON THE YELLOW SHEET IN THE BLOCK ENTITLED "NIGHT TIME" LOG NIGHT VFR TIME. LOG NIGHT INSTRUMENTS IN THE INSTRUMENT BLOCK ANNOTATED WITH AN "N".

READ AND INITIAL FILE. THERE IS A READ AND INITIAL FILE IN OPERATIONS. WHEN DOPE IS INSERTED IT WILL BE DATED. YOU HAVE ONE WEEK TO READ IT. IF WE DIDN'T CONSIDER IT IMPORTANT WE WOULDN'T PUT IT IN THERE.

813. THIS WEEK 813 CAME INTO THE BARN FOR A CHECK AND WOUND UP NEEDING THREE ENGINES CHANGED FOR HOT SECTION DAMAGE. IT WOULD APPEAR THAT SOMEONE WENT ALL THE WAY FROM POINT A TO POINT B AT MILITARY POWER. TURBINE LIFE IS DIRECTLY RELATED TO TEMPERATURE - THE HIGHER THE OPERATING TEMPERATURE THE SHORTER THE LIFE. SINCE THE TEMPERATURE INDICATING SYSTEM IS THE LEAST ACCURATE AND RELIABLE OF THE ENGINE PERFORMANCE GAUGES MANY ALLOWANCES HAVE BEEN MADE, SUCH AS, SETTING TD SYSTEMS TO 961°, USING 920° FOR MAX CONTINUOUS, AND SETTING CRUISE POWER BY TORQUE OR FUEL FLOW WITH THE LOWEST TEMP ENGINE AS THE MASTER. THE PILOT CAN FURTHER CONSERVE ENGINES BY USING HIGH TEMP POWER SETTINGS SPARINGLY. RARELY IS FULL THROTTLE REQUIRED FOR TAKEOFF; IT ISN'T NECESSARY TO CLIMB TO YOUR CRUISE CEILING; IT ISN'T NECESSARY TO CLIMB AT MAX CONTINUOUS.

OF COURSE, IN THE INTEREST OF PROLONGING ENGINE LIFE, A TAKEOFF USING ONLY CROSS OVER POWER ISN'T THE ANSWER. THE POWER IS THERE. IF YOU NEED IT - USE IT, IF YOU THINK YOU NEED IT - USE IT. IF YOU DON'T NEED IT - BE EASY. CAN YOU IMAGINE YOURSELF BETWEEN HERE AND THERE WITH ONLY ONE ENGINE? IT COULD HAVE HAPPENED IN THIS CASE.

EXTRA PEOPLE ON THE FLIGHT DECK. RECENTLY A HEADCOUNT WAS MADE OF THE NUMBER OF FOLKS IN THE COCKPIT WHEN A LANDING WAS ABOUT TO BE MADE. THERE WERE 10 SOULS FORWARD OF THE GALLEY FLOOR! THIS'LL NEVER SELL. IT'S REDICULOUS FOR THE ENGINEER TO HAVE TO BURROW THROUGH THREE RANKS OF BODIES TO GET TO THE CIRCUIT BREAKERS. IT'S POSSIBLE TO HAVE ALL FIVE EXTRA PEOPLE IN FRONT OF THE PILOT SHOULD HE USE MUCH BRAKES AND REVERSE. AS STATED BEFORE, THERE WILL BE NO MORE THAN THE FIVE CREW-MEMBERS ON THE FLIGHT DECK DURING TAKEOFF AND LANDING EXCEPT AT THE EXPRESS CONSENT OF THE AIRCRAFT COMMANDER AND THEN ONLY AS ABSOLUTELY NECESSARY. IN ANY EVENT THERE WILL BE A SEAT FOR EACH PERSON ON THE AIRCRAFT. THE LOADMASTER WILL RESERVE SEATS IN THE REAR FOR EACH CREW-MEMBER OVER THE FIVE STATIONED FORWARD.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

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ENCLOSURE (45)

(b) (6)

ORIGINAL

VMOR-152 AAR 1-55A involving KC-130F BUONO 149802 occurring 24 August 1965
Pilot: (b)(6)

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group-17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

19 MARCH 1965

NOTICE TO FLIGHT CREWS

OPERATIONS NOTES:

1. RAFTS. OUR LATEST INCIDENT OF AN INFLIGHT RAFT INFLATION BROUGHT UP A COUPLE OF POINTS. (1) THE RAPID REACTION OF THE PILOT IN SLOWING THE AIRCRAFT DOWN WHEN HE FELT THE WING GO DOWN AND THE BUFFET IS PROBABLY WHY THE RAFT STAYED IN THE WING WHEN THE DOOR POPPED OPEN. THIS IS HEAD WORK. ANYTIME YOU EXPERIENCE LOSS OF CONTROL OR UNUSUAL BUFFETING, SLOW DOWN (STALLS EXCLUDED). AT HIGH SPEEDS A SLIGHT VIBRATION OF A CONTROL SURFACE, FOR EXAMPLE, COULD CAUSE THE WHOLE THING TO CARRY AWAY. (2) IN AN EMERGENCY OR UNUSUAL SITUATION EACH CREW MEMBER HAS A DUTY STATION AND IS SUBJECT TO THE AIRCRAFT COMMANDER'S DIRECTIONS. CO-PILOT: THE PILOT MAY NEED HELP IN ACTUAL CONTROL OF THE AIRCRAFT OR MAYBE HE'LL WANT OTHER ASSISTANCE THAT REQUIRES YOU IN YOUR SEAT. ENGINEER: YOUR STATION IS IN YOUR SEAT READY TO ASSIST THE PILOT AS THE DIRECTS. OTHER CREWMEMBERS: REMAIN AT YOUR STATION WITH YOUR HEADSET ON AND STANDBY FOR INSTRUCTIONS.

2. TAXIING. MUCH OF THIS IS REITERATION. DEPARTING AIRFREIGHT, TAXI FORWARD AND AROUND THE C-117/C-54 LINE. DO NOT - REPEAT - DO NOT MAKE A 90 OR 180 IN FRONT OF THE HANGARS. THE PROP BLAST IS CONSIDERABLE. KEEP IN MIND WHAT IS BEHIND YOU. AN A4 WAS ONCE UPSET TAXIING BEHIND A 130 CHECKING CROSSOVER.

3. SMOOTHNESS. IN MANY WAYS THE LIFE OF A MULTIMOTOR PILOT LEAVES MUCH TO BE DESIRED. IT'S LONG HOURS OF SOMETIMES APPARENTLY UNPRODUCTIVE EFFORT; MACH .3 OR .4 IS ABOUT ALL YOU SEE; YOU DON'T WEAR A MOON SUIT--SOME OF US EVEN NEED LABELS TO BE RECOGNIZED AS PILOTS! IT'S EVEN DULL FLYING IN SOME RESPECTS, ESPECIALLY IF YOU GO THROUGH PROCEDURES IN A SLAP DASH MANNER; ALWAYS CLIMB VFR; CLAP IT ON AUTO PILOT ASAP; USE TWO DOTS, FIVE DEGREES, AND TWO HUNDRED FEET FOR YOUR ON COURSE, ON HEADING AND ON ALTITUDE CRITERIA; ALWAYS CANCEL INSTRUMENTS ASAP; "ARRIVE" LONG WITH SOTS OF BRAKES AND REVERSE.

THE NORMAL REGIME OF FLIGHT FOR THE C130 IS ABOUT THIRTY DEGREES OF BANK, ABOUT TEN DEGREES OF PITCH (PLUS OR MINUS) AND AS LITTLE OVER ONE G AS POSSIBLE. TOO MANY PILOTS TEND TO FORGET WHAT IS AFT OF THEIR PERIPHERAL VISION. REMEMBER THERE IS OFTEN A LOT OF LOOSE GEAR IN THE AIRPLANE, IE: PEOPLE, COFFEE, BOX LUNCHES, NOSE PINS, ETC. DON'T DO ANYTHING UNUSUAL WITHOUT WARNING. SOMEONE IN THE REAR CAN BE THROWN AROUND VIOLENTLY BY A MANEUVER JUST BARELY NOTICEABLE BY THE PILOT.

YOUR PASSENGERS CAN'T KNOW THAT YOURS WAS THE BEST ROCKET AVERAGE IN A PAST SQUADRON; "HE'S A SMOOTH PILOT" IS THE COMPLIMENT IN THIS TYPE OF FLYING. PRECISENESS IS IN ORDER.

FOLLOWING WHAT PASSENGERS THINK A LITTLE FURTHER: WHAT MUST THEY THINK WHEN THEY COME FORWARD FOR A LOOK SEE AND ARE CONFRONTED WITH THE COPILOT RECLINED AND ASLEEP, THE ENGINEER READING STARS AND STRIPS AND THE PILOT ENROCRESSED IN A SKIN BOOK. IFR CLEARANCE ONLY GIVES PROTECTION AGAINST OTHER REPORTED TRAFFIC ON HARD ALTITUDES.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

ENCLOSURE (46)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b)(6)

RADAR SEPARATION ONLY GIVES YOU PROTECTION AGAINST OTHER BEACON TRAFFIC FOR SURE. ITS NOT JUST YOUR SKINS, IT'S UP TO NINETY TWO OTHER SKINS AFT OF THE 245 BULKHEAD. THIS ISN'T INFERENCE THAT ALL CREW MEMBERS SHOULD BE SITTING AT ATTENTION BUT --- SOMEONE MUST WATCH THE STORE AND IN SOME SITUATIONS THE MORE EYES LOOKING OUT THE BETTER.

4. WHO CAN RIDE. A FURTHER RESTRICTION TO ALLOWABLE PASSENGERS ON FMAW AIRCRAFT NO FEMALES EXCEPT NURSES IN UNIFORM.

5. GROSS WEIGHT. THE C130 USHERED IN A NEW ERA FOR NAVY/MARINE TRANSPORT FLYING. THE HANDBOOK STATES "THE PERFORMANCE OF THIS AIRPLANE IS FAR SUPERIOR TO THAT OF OTHER AIRPLANES WHICH AIRCREWS HAVE BEEN ACCUSTOMED TO USING." AS TRANSPORTS GO THIS IS VERY TRUE. THE FAA REQUIRES THAT AN AIRCRAFT NOT BE LOADED SO HEAVY THAT A 50 FPM RATE OF CLIMB CANNOT BE MAINTAINED IN THE EVENT OF AN ENGINE LOSS (TAKE OFF CONFIGURED EXCEPT GEAR UP AND METO POWER). IN EFFECT, THE MAXIMUM GROSS IS DETERMINED BY THE HORSE POWER OF THE ENGINES.

IN THE SAME SITUATION WITH THE C130 THE RATE OF CLIMB AT 135,000 POUNDS IS IN THE NEIGHBORHOOD OF 1500 FPM. IN THE CASE OF THE C130 THE GROSS WEIGHT RESTRICTION IS DETERMINED BY THE AIRFRAME STRENGTH.

IN ORDER FOR THE AIRCRAFT TO PERFORM AS A REFUELER, CONCESSIONS HAVE TO BE MADE TO THE AIRFRAME: (1) LIMITING OUTBOARD TANK FUEL TO COMPENSATE FOR THE FUEL WEIGHT. (2) GENTLENESS IN HANDLING. THE HANDBOOK STATES THAT 135,000 IS THE MAXIMUM GROSS BUT THAT WEIGHTS OVER 135,000 UP TO 145,000 ARE CONSIDERED AN EMERGENCY SITUATION AND THAT OPERATIONS SHOULD BE UNDERTAKEN ONLY WHEN OPERATIONAL NECESSITY DICTATES AND WITH DUE CONSIDERATION TO WEATHER, RUNWAYS, OBSTACLES, CG AND PILOTS ABILITY. IN OTHER WORDS, CROSSING OVER 135,000 SHOULD BE THE EXCEPTION NOT THE RULE. HAVE YOU EVER NOTICED A HALF TON PICKUP WITH A TON LOADED IN IT? SURE, IT CARRIES THE LOAD BUT SOON THE SPRINGS START BENDING THE WRONG WAY, THE BED ASSUMES A PERMANENT CONTACT WITH THE FRAME, SHOCKS GO BAD, BRAKES WEAR OUT FAST; IT'S THE SAME IN AIRCRAFT.

TWO ADDITIONAL THINGS TO KEEP IN MIND:

- (1) 145,00 IS THE ABSOLUTE MAXIMUM GROSS.
 - (2) DO NOT EXCEED 7,875 POUNDS OF USEABLE FUEL IN THE OUTBOARD WING TANKS. THE LOW LEVEL SHUT OFF VALVES TAKE CARE OF THIS WITH PODS INSTALLED.
- THESE ARE STRUCTURAL LIMITATIONS.

6. GTC. REMEMBER THE STORY THAT GOES: "FOR THE WANT OF A HORSESHOE NAIL A KINGDOM WAS LOST" WELL, GTCs ARE BECOMING OUR "HORSESHOE NAILS". WE'RE OUT OF THEM WITH NONE IN SIGHT. THE OVERHAUL PERIOD IS BASED ON NUMBER OF STARTS. THE MAJORITY OF STARTS CAN BE ELIMINATED IF THE GTC IS ONLY USED FOR ENGINE STARTS AND OTHER NECESSARY REASONS. MOVEMENT OF THE RAMP IS NOT A NECESSARY REASON TO START THE GTC. USE THE HAND PUMP.

7. SETTING THE PARKING BRAKE. RELEASE THE PARKING BRAKE, AFTER THE CHOCKS ARE IN, AND BLEED OFF THE TRAPPED PRESSURE. SEVERAL WHEEL BRAKES HAVE BEEN FOUND TO BE FROZEN DUE TO BRAKES BEING LEFT SET FOR A PERIOD OF TIME. IN ONE INSTANCE A BRAKE HAD TO BE PARTIALLY DIS-ASSEMBLED TO RELEASE THE LOCKED BRAKE. LET'S GET BACK TO THE TIME HONORED PROCEDURE OF USING CHOCKS INSTEAD OF PARKING BRAKES.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPMV INST P3750.6E

ENCLOSURE (46)

ORIGINAL

VNCR-152 AAR 1-65A involving KC-130F BUNC 149802 occurring 24 August 1965
Pilot: (b)(6)

8. SLIPPING THE LOAD. NO MATTER HOW YOU TRY TO MAKE UP TIME ON YOUR ITINERIES KEEP IN MIND THAT PROPER ATTENTION MUST BE GIVEN TO THE LOADING OF THE AIRCRAFT. THIS IS MAINLY THE LOADMASTER'S JOB. HE MUST DECIDE WHERE TO PUT WHAT AND HOW IT IS TO BE TIED DOWN. LAST BUT NOT LEAST HE MUST WORK UP THE 365F. THIS ALL TAKES TIME. TAKE THE TIME: THIS IS A REQUIREMENT OF SAFETY. AIRCRAFT COMMANDER: IT YOUR RESPONSIBILITY THAT A 365F BE EXECUTED AND LEFT ON DEPOSIT AT EITHER AIR-FREIGHT OR BASE OPS FOR ALL LEGS OF FLIGHT WITH A CABIN LOAD. ALSO, WHEN YOU'VE FILED FOR A 15 MINUTE STOP, DON'T HOP AROUND CRUMBLING AT THE LOADMASTER IF HE'S NOT FINISHED. OF COURSE, YOU HAVE AN ALTERNATIVE - YOU COULD SLIP IT YOURSELF!

9. BRAKE CONTROL VALVE. WHEN A CONTROL SURFACE IS AGAINST A STOP IT'S BOOST PACKAGE RETURNS FLUID UNDER PRESSURE TO THE JUMP. IN CERTAIN CASES A SLIGHT LEAKAGE OF THE BRAKE CONTROL VALVE CAN DIRECT THIS PRESSURE TO THE BRAKES AND CAUSE A SLIGHT DRAG. AS YOU TAXI THE CO-PILOT SHOULD HOLD THE YOKE SO THE ELEVATOR IS NOT AGAINST THE FORWARD STOP. THIS CAN EASILY BE DONE WITH YOUR HEEL.

10. CAPTURED AMMUNITION. CAPTURED AMMUNITION OF UNKNOWN CHARACTERISTICS MAY BE TRANSPORTED ON MILITARY AIRCRAFT ONLY IF: (1) EOD PERSONNEL HAVE INSPECTED, TAKEN ACTION TO ENSURE IT SAFE AND SIGNED A CERTIFICATE TO THIS EFFECT. (2) THE PACKAGE MUST BEAR CERTIFICATION ON DD FORM 1287-2, THAT THE SHIPMENT IS PACKAGED IN CONFORMANCE WITH NAVJEP 15-03-500. (3) IF A CLASSIFIED SHIPMENT IT MUST BE CERTIFIED BY A DD FORM 1387-2 (UNCLASSIFIED), AND COMPLETE DATA AND MANIFESTS WILL ACCOMPANY AND BE AVAILABLE TO THE AIRCRAFT COMMANDER AND HANDLING CREW.

NATOPS CHANGES/ADDITIONS

1. AIR START SELECT MECHANICAL GOVERNING FOR THE START VICE NORMAL.

2. PROPELLER FAILURES.
A PROPELLER FAILURE WILL BE INDICATED BY A PROPELLER LOW OIL LIGHT, OVERSPEED, RPM SURGE, OR FLUCTUATION. AN OFF SPEED CONDITION MAY BE CAUSED BY IMPROPER SYNCHROPHASER OPERATION, ELECTRICAL OR SYNCHROPHASER MALFUNCTION, OR MECHANICAL OR HYDRAULIC MALFUNCTION.

THE PITCH LOCK ASSEMBLY ENGAGES AT AN OVERSPEED OF APPROXIMATELY 103.5 PERCENT RPM (AND/OR UPON LOSS OF PROPELLER OIL PRESSURE) AND PREVENTS THE PROPELLER BLADES FROM DECREASING PITCH.

3. PROPELLER LOW OIL WARNING
LOW PROPELLER OIL MAY CAUSE RPM FLUCTUATIONS. LOW OIL LEVEL IS INDICATED BY THE PROPELLER LOW OIL WARNING LIGHT WHICH ILLUMINATES WHEN THE OIL QUANTITY IS TWO QUARTS LOW. FLUCTUATION OF RPM OCCURS WHEN THE PROPELLER PUMPS HAVE AN INSUFFICIENT OIL SUPPLY. IN THE ABSENCE OF FLUCTUATIONS OR OVERSPEEDING, THERE IS NORMALLY A SUFFICIENT AMOUNT OF OIL REMAINING TO FEATHER WHEN THE LOW OIL WARNING LIGHT ILLUMINATES.

WHEN THE LOW OIL WARNING LIGHT ILLUMINATES (WITH NO RPM FLUCTUATIONS OF OVERSPEEDING), SHUT DOWN THE ENGINE IMMEDIATELY IN ACCORDANCE WITH ENGINE SHUT-DOWN PROCEDURE IN SECTION II.

4. OVERSPEEDING AND UNDERSPEEDING IN FLIGHT
WHEN RPM FLUCTUATIONS OR OVERSPEEDING IS ACCOMPANIED BY LOW OIL WARNING, FOLLOW THE PROCEDURE UNDER PITCH LOCK PROPELLER OPERATION IN THIS SECTION.
WHEN RPM FLUCTUATIONS OR OVERSPEEDING IS NOT ACCOMPANIED BY LOW OIL WARNING, PROCEED WITH THE FOLLOWING STEPS:

TURN THE SYNCHROPHASE MASTER SWITCH TO THE OFF POSITION, AND OBSERVE RPM OF THE ENGINES. ANY OFF SPEED INDICATION OF THE TACHOMETER SHOULD BE CONFIRMED BY

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ENCLOSURE (46)

ORIGINAL

VMGR-152 AIR 1-65A involving KC-130F HUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

REFERENCE TO THE AC GENERATOR FREQUENCY METER. AT 100 PERCENT RPM THE AC GENERATOR FREQUENCY SHOULD BE SLIGHTLY LESS THAN 398 CYCLES PER SECOND. IF THE SPEED IS STEADY AND WITHIN LIMITS ON THE OTHER MASTER, SELECT IT AND OPERATE THE RESYNCHROPHASE SWITCH. IF THIS DOES NOT CORRECT THE TROUBLE, TURN THE SYNCHROPHASE MASTER SWITCH TO THE OFF POSITION.

IF NORMAL GOVERNING IS ERRATIC OR OFF SPEED, TURN THE PROPELLER GOVERNOR SWITCH TO THE MECH GOV POSITION. THIS WILL ELIMINATE ALL SYNCHROPHASER ELECTRICAL CIRCUITS. IF THIS ACTION BRINGS THE RPM WITHIN LIMITS, CONTINUE FLIGHT IN THE MECH GOV POSITION.

IF PITCHLOCK HAS BEEN ENGAGED BY OVERSPEEDING, DISENGAGEMENT OF THE PITCHLOCK MAY BE ASSURED BY ADVANCING THE THROTTLE SLOWLY TOWARD THE TAKE OFF POSITION. IF THE RPM REMAINS CONSTANT, THE PITCH LOCK IS DISENGAGED. IF THE RPM FOLLOWS THROTTLE MOVEMENT, THE PITCHLOCK IS ENGAGED AND IT WILL BE NECESSARY TO FOLLOW THE PROCEDURES OUTLINED IN PITCHLOCK PROPELLER OPERATION IN THIS SECTION.

IF THE RPM IS ERRATIC IN MECHANICAL GOVERNING AND DROPS BELOW 98 PERCENT AND/OR PRODUCES OBJECTIONABLE POWER SURGES, SHUT DOWN IN ACCORDANCE WITH ENGINE SHUTDOWN PROCEDURE IN THIS SECTION.

5. PITCH LOCK PROPELLER OPERATION

THE PROPELLER MUST BE OPERATED WITH PITCH LOCKED UNTIL A SUITABLE LANDING AREA IS REACHED. OPERATE THE AFFECTED ENGINE AT APPROXIMATELY 104.5 PERCENT. THIS ASSURES CONTINUED ENGAGEMENT OF THE PITCH LOCK AND MAINTAINS THE HIGHEST BLADE ANGLE.

NOTE

RPM WILL REMAIN ABOVE THE PITCH LOCK ENGAGEMENT SETTING AS LONG AS POWER AND TRUE AIRSPEED REMAIN CONSTANT. IF REDUCTION IN INDICATED AIRSPEED IS REQUIRED, RPM MAYBE MAINTAINED BY APPLICATION OF ADDITIONAL POWER (IF AVAILABLE) OR BY MAINTAINING THE SAME TRUE AIRSPEED AT A HIGHER ALTITUDE.

6. ENGINE SHUT DOWN WITH PITCH LOCKED PROPELLER

WHEN A SUITABLE LANDING AREA IS REACHED, PERFORM THE FIRST TWO ITEMS BELOW WHILE AT CRUISE ALTITUDE. COMPLETE THE REMAINING ITEMS AS APPROPRIATE:

MAINTAIN FIXED THROTTLE SETTING WITH ENGINE OPERATING ON THE FUEL GOVERNOR (APPROXIMATELY 104.5 PERCENT).

PULL THE FOLLOWING CIRCUIT BREAKERS ON THE CO-PILOT'S SIDE CIRCUIT BREAKER PANEL FOR THE AFFECTED ENGINE.

FIRE SHUT-OFF VALVE --- OIL
EMERG FEATHER
FEATHER AND AIR START
FIRE SHUT-OFF VALVE --- HYDRAULIC

KEEP THE AFFECTED THROTTLE AT THE TAKE OFF POSITION.

WHEN BEGINNING DESCENT OR PENETRATION, DECREASE AIRSPEED TO 150 KIAS. AS SOON AS RPM CANNOT BE MAINTAINED ABOVE 103.5 PERCENT, THE RPM SHOULD BE DECREASED TO 100 PERCENT OR SLIGHTLY BELOW AS QUICKLY AS POSSIBLE. AS SOON AS RPM CANNOT BE MAINTAINED ABOVE 95 PERCENT OR SHORTLY BEFORE ENTERING THE TRAFFIC PATTERN, PULL THE FIRE EMERGENCY HANDLE FOR THE AFFECTED ENGINE.

WARNING

IN THE RANGE OF 103.5-100 PERCENT, A SLIGHT INCREASE IN BLADE ANGLE BY DISENGAGE THE PITCH LOCK. IF OIL PRESSURE IS INSUFFICIENT TO MAINTAIN THE INCREASED

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.68

ENCLOSURE (46)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUHO 149802 occurring 24 August 1965
Pilot: (b) (6)

BLADE ANGLE AFTER THE PITCH LOCK IS DISENGAGED, THE BLADE ANGLE MAY DECREASE AND ALLOW THE ENGINE TO OVERSPEED AND/OR DECOUPLE.

NOTE

AS AIRSPEED AND ALTITUDE ARE DECREASED THE RPM (OF THE ENGINE WITH THE PITCH LOCKED PROPELLER) WILL DECREASE. THE AIRSPEED AND ALTITUDE AT WHICH FULL THROTTLE WILL NOT MAINTAIN AT LEAST 95 PERCENT RPM WILL VARY WITH THE BLADE ANGLE AT WHICH THE PROPELLER IS PITCH LOCKED.

NOTE

LEAVE THE AFFECTED ENGINE CONDITION LEVER IN THE RUN POSITION. THE ABOVE PROCEDURES WILL ONLY SHUT OFF FUEL TO THE ENGINE AND WILL NOT FEATHER THE PROPELLER. THE PITCH LOCK SHOULD REMAIN ENGAGED AND THE PROPELLER SHOULD CONTINUE TO WINDMILL.

WARNING

IF OVERSPEED OCCURS, REDUCE AIRSPEED AS RAPIDLY AS POSSIBLE TO THE LOWEST SPEED AT WHICH SAFE CONTROL OF THE AIRCRAFT CAN BE MAINTAINED, AND DESCEND. SOME WHAT MORE POWER THAN USUAL WILL BE REQUIRED BECAUSE OF THE INCREASED DRAG.

7. PROPELLER FAILS TO FEATHER

IF PROPELLER ROTATION CONTINUES AFTER FEATHER HAS BEEN INITIATED, IMMEDIATELY SLOW DOWN TO THE MINIMUM SAFE AIRSPEED.

1. IF ROTATION STOPS, CONTINUE WITH ENGINE OUT OPERATION.
2. IF ROTATION DOES NOT STOP, HOLD FEATHER OVERRIDE BUTTON IN FOR 30 SECONDS.
3. IF ROTATION CONTINUES:

A. IF FIRE HANDLE IS PULLED RESTORE OIL TO ENGINE BY RESETTNG THE FIRE EMERGENCY CONTROL HANDLE.

B. MAINTAIN MINIMUM SAFE AIRSPEED.

8. INFLIGHT DECOUPLING OF ENGINE AND PROPELLER

THE REDUCTION GEAR SECTION DECOUPLES FROM THE POWER SECTION OF THE ENGINE IF A PROPELLER ATTEMPTS TO DRIVE THE POWER SECTION, AND IF THE ENGINE NEGATIVE TORQUE BUILDS UP BEFORE DECOUPLING OF AN ENGINE TAKES PLACE, AIRCRAFT YOW MAY BE NOTICED. HOWEVER, THERE MAY BE LITTLE OR NO DIFFERENCE IN AIRCRAFT FEEL. AND THE KNOWLEDGE THAT AN ENGINE HAS DECOUPLED MUST BE GAINED FROM INSTRUMENT INDICATION. IN THE EVENT THAT THE DECOUPLING IS CAUSED BY ENGINE FAILURE/FLAMEOUT, TORQUE, TURBINE INLET TEMPERATURE AND FUEL FLOW WILL DROP TO NEAR ZERO, AND POWER SECTION OIL PRESSURE WILL DROP. RPM MAY TEMPORARILY INCREASE, THEN SETTLE TO NORMAL. HYDRAULIC PRESSURE, GENERATOR OUTPUT AND REDUCTION GEAR SECTION OIL PRESSURE WILL REMAIN NORMAL. EXTREMELY LOW TURBINE INLET TEMPERATURE AND FUEL FLOW FOR A GIVEN POWER LEVER POSITION, ACCOMPANIED BY FLUCTUATION AND NEAR ZERO TORQUE, MAY BE AN INDICATION OF A DECOUPLING IN WHICH THE ENGINE HAS CONTINUED TO OPERATE. WHEN DECOUPLING IS OBSERVED OR SUSPECTED, IMMEDIATELY FEATHER THE PROPELLER CONCERNED TO PREVENT OR TO MINIMIZE DAMAGE.

CAUTION

DO NOT RESTART THE ENGINE UNTIL THE SAFETY COUPLING HAS BEEN REPLACED.

9. MAGNETIC OVERHEAT WARNING

1. PULL THE FIRE EMERGENCY CONTROL HANDLE.
2. PLACE THE CONDITION LEVER IN FEATHER.
IF THE WARNING LIGHT REMAINS ON:
3. PLACE THE FIRE EXTINGUISHER AGENT DISCHARGE SWITCH IN NO. 1 POSITION.
4. FOLLOW ENGINE FAIL CLEANUP CHECK LIST.

10. INSTRUMENT RELAY FAILURES

IN THE EVENT OF INSTRUMENT RELAY FAILURES, COURSE INFORMATION WILL ONLY BE AVAILABLE WITH HSI SELECTED AND NAV-1 TUNED. REGARDLESS OF NAV MODE SELECTED,

SPECIAL HANDLING REQUIRED in accordance with Pam 66, OPNAV INST P3750.6E

ENCLOSURE (46)

ORIGINAL

VMMR-152 AAR 1-65A involving KC-130F BUNO 119802 occurring 24 August 1965

Pilot: (b) (6)

THE INFORMATION PROVIDED THE HSI WILL BE FROM NAV-1. TACAN COURSE INFORMATION WILL ONLY BE AVAILABLE WITH HSI SELECTED. ILS GLIDE SLOPE INFORMATION WILL, HOWEVER, CONTINUE TO BE PRESENTED ON THE 1D-249 (EVEN WITH HSI SELECTED). THE 1D-249 GLI SLOPE WARNING FLAG WILL BE DISPLAYED DUE TO THE FACT THAT THE ARM-16 IS NOT CIRCUIT, BUT THE ALARM FLAGS ARE.

11. ENGINE DRIVEN HYDRAULIC PUMP FAILURE.

FAILURE OF AN ENGINE DRIVEN PUMP IS INDICATED BY THE ILLUMINATION OF THE PUMP PRESSURE WARNING LIGHT. WHEN THIS OCCURS THE FOLLOWING ACTION SHOULD BE TAKEN:

1. IMMEDIATELY TURN OFF ALL HYDRAULIC PUMPS FOR THAT SYSTEM.
2. CHECK THE HYDRAULIC FLUID LEVEL IN THE RESERVOIR.

A. IF THERE IS A LOSS OF HYDRAULIC QUANTITY, CHECK FOR FLUID LOSS AT UNITS BEING SUPPLIED BY THE MALFUNCTIONING SYSTEM. RESERVICE THE RESERVOIR.

- (1) TURN ON SUCTION BOOST PUMP. IF FURTHER FLUID LOSS OCCURS, CONTINUE OPERATION WITH ALL PUMPS OFF.
- (2) TURN ON SUCTION BOOST PUMP. IF NO FURTHER FLUID LOSS OCCURS TURN ON UNAFFECTED ENGINE DRIVEN PUMP.

B. THE ENGINE DRIVEN PUMP IS GEARED DIRECTLY TO THE ENGINE AND IF THE SHEAR NECK OF THE PUMP DRIVE SPLINE DOES NOT SEPARATE (MAINLY TO PROTECT THE ENGINE GEAR BOX) THE PUMP CAN DISENTIGRATE INTERNALLY AND THIS METAL TO METAL DISENTIGRATION CAN GENERATE ENOUGH HEAT TO CAUSE A FIRE HAZARD.

3. BECAUSE OF THIS HAZARD, PILOT'S DISCRETION SHOULD BE EXERCISED AS TO THE NEED OF AN ACTUAL ENGINE SHUT DOWN.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

ENCLOSURE (46)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUONO LH9802 occurring 24 August 1965
Pilot: (b) (6)

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
Marine Wing Service Group 17
1st Marine Aircraft Wing, Aircraft, FMF, Pacific
Fleet Post Office, San Francisco 96601

16 March 1965

FLIGHT SAFETY BULLETIN

At the present time, our squadron enjoys perhaps one of the finest safety records in the Marine Corps. Since we've been flying the C-130 we have not had a major accident and have had only a few incidents other than engine shutdowns in flight. Actually, we very seldom have a bonafide emergency.

Looking at the status board in the Operations Office we see that of the total thirty-nine pilots who fly our aircraft, thirty of them are designated Aircraft Commanders. Most of the remainder are fully qualified and need only a check ride prior to designation. I think that this high level of experience coupled with the dependability of the aircraft we fly is the major reason for our fine safety record.

Seemingly, this is an excellent state of affairs but unfortunately, it's bound to be accompanied by that old nemesis to safety called complacency. With things going so smoothly it is hard for us to really be concerned about safety and it's natural for us to become relaxed in our procedures and start taking "short-cuts" like skipping check lists, starting two at a time, skipping pre-flights, etc.

Also, right in the same vein, comes the subject of aircraft limitations and emergency procedures. I'm sure that there aren't any of us who at one time or another weren't completely familiar with them and able to go through them without hesitation, however, as time goes by our memory dims and although we may not forget them completely we have to take a few moments to remember. Sometime, these few moments may not be available. It seems that no matter how sincere our desire to get out the handbook and review, we just never do get to it.

Well, I'm going to make it easy for everybody. I'm going to get out the handbook, review these items for you, and then each morning at our all pilots meeting, I'll bring up for discussion and review either some of the aircraft limitations, an emergency procedure or maybe just some practice that I've observed that I feel needs to be brought up. In this way I hope to bring everyone back up to snuff on their knowledge of our aircraft's limitations and emergency procedures, and make you more safety conscious thus defeating this tendency to be complacent. I have lots and lots of material at the present time but sooner or later I'm going to start running short. I'd certainly appreciate it if whenever you see a practice that you feel is unsafe, you will bring it to my attention so that I can bring it to everyone's attention. For the benefit of the pilots who aren't able to attend our AFM's, I will publish this bulletin periodically and in it include the items that are discussed.

I have only two items to bring out in this edition. The first of these is "TAXIING". This subject has already had a great deal of publicity from a passenger comfort point of view but I want to discuss it from the standpoint of safety. I haven't seen anyone taxiing excessively fast, however, the thing I'm primarily concerned with is turning. The next time you get a chance, stand directly behind or directly in front of a C-130 that is turning. When you do, it will be very obvious to you that anything more than a gentle

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV IN T P3750.6E

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ENCLOSURE (47)

REPRODUCED TO BE A TRUE COPY
(b) (6)

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUINO 119802 occurring 24 August 1965
Pilot: (b) (6)

turn will place a great deal of stress on the landing gear wheels and tracks. The personnel who provide us with taxi directions away from home aren't always aware of this and will sometimes try to turn you around on a dime as they would an R4D or an R5D. It's up to you as the pilot not to accept these directions and if necessary stop the aircraft and explain the problem to the director. You'll probably be doing the next guy a big favor. Another thing to remember is that after completing a turn you should always roll forward at least ten feet before parking to allow the gear to straighten out. The handbook provides us with certain taxi limitations that apply to aircraft when the gross weight exceeds 130,000 lbs. They are as follows: (1) The nose wheel should never exceed a twenty degree angle, (2) a maximum forward speed of 10 kts and (3) no sudden or uneven brake applications. Keep these limitations in mind because most of our commitments exceed 130,000 lbs.

The second subject that I'd like to discuss is "Maximum Penetration Airspeeds". The airspeed limitations are found in figure 5-4 on page 5-8 of the handbook. There are two lines depicted on the chart. One is labeled "Maximum level flight speed" and the other is labeled "Maximum Permissible Speed". There is some question as to whether or not the latter may be used to determine the maximum penetration airspeed.

Lockheed has answered this question for us in a recent letter to the squadron. They recommend that the Maximum Level Flight Speed line be used as the limiting airspeed during all normal operations regardless of flight regime. They added that in reality the two lines on the chart are mislabeled and should be changed to read "Maximum Recommended Speed" and "Maximum Speed". They designed and built the aircraft so the wisest course of action is adherence to their recommendation.

Basically, the jet penetration is designed to be executed at 240-260 kts at a 4000 to 6000 FPM rate of descent. At a rate of descent of 4000 FPM you will have no trouble descending to the minimum altitudes in the C-130 without exceeding 250 kts. It is necessary to reduce your IAS to approximately 160 kts prior to commencing the descent. In view of this and Lockheeds recommendation of the preceding paragraph, lets limit our maximum airspeed in any flight regime to 250 kts.

(b) (6)

NOTE: From 5 March until further notice, the JASDF squadron will be operating an unescorted banner target. This target will be towed 1000 feet behind an F-86 aircraft. All pilots are urged to exercise extreme caution.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

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(b) (6)

ENCLOSURE (17)

VMGR-152 AAR 1-65A involving KC-130F BUINO 149802 occurring 24 August 1965.
Pilot: (b) (6)

AIRCRAFT ACCIDENT REPORT

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	C	Damage To Aircraft	VI	3-4
	D	Investigation and Analysis	VII	5-14
	E	Conclusions	VIII	15
	F	Recommendations	IX	16

ORIGINAL

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66, OPNAVINST 3750.6E

AIRCRAFT ACCIDENT REPORT

OPNAV FORM 3750-1A (Rev. 3-63) Page 1

SPECIAL HANDLING REQUIRED in accordance with
 Para. 68, OPNAV INSTRUCTION 5750.6, effective edition

OPNAV FORM 3750-1A

PART 1 GENERAL

1. AIRCRAFT ACCIDENT REPORT APPOINTED BY CG, FMAW	2. SERIAL NO. 1-55A	3. DTG LOCAL OF MISAP 241007:56H	4. MODEL AIRCRAFT KC-130F	5. BUREAU NUMBER 149802
6. LOCATION OF MISAP Hong Kong International	7. DATE OF MISAP DAY	8. TIME OF MISAP 00:01	9. TIME IN FLIGHT 182	10. DAMAGE ALFA
11. VIA CG, VMGR-152 CG, FMAW CG, FMEFAC COMNAVIAIRPAC	12. RC	13. TYPE CLEARANCE IPR	14. ELEVATION AT TIME OF MISAP 106 E	15. WEIGHT 115,000
16. BRIEF DESCRIPTION OF MISAP Attempted three engine takeoff (#2, 3 & 4) Lost directional control resulting in uncontrolled collision with water.				
17. LIST MODEL BUREAU REPORTING CUSTOMER AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete 1704F Form 5750-1 for each A/C) 20. N/A				

18. FACTOR	19. FACTOR	20. FACTOR
X 1. PILOT ERROR IN TECHNIQUE/JUDGMENT	9. REWARDING PERSONNEL	17. WEATHER
X 2. PILOT DEVIATION FROM BUREAU PROCEDURES	10. LANDING SIGNAL OFFICER	18. DESIGN AIRCRAFT
3. PILOT INCORRECT OPERATION OF A/C SYSTEM	11. OTHER FACTORS (Specify)	19. DESIGN CREW EQUIPMENT
4. PILOT OTHER (Specify)	12. ADMINISTRATIVE	20. DESIGN OTHER (Specify)
X 5. CREW	13. PROCEEDURE RUNWAY LIVERPLAN TADIRY, FLIGHT MODE	21. BOLLINGPITCHING DECK BOLLING ISAS
6. MAINTENANCE PERSONNEL	14. FACTORS NEW AIDE, LANDING AIDS (SEA, OCA, ILS, HARBOR)	X 22. MATERIAL FAILURE/MALFUNCTION
X 7. MAINTENANCE SUPERVISORY PERSONNEL	15. FACILITIES CAPABILITY, ASSISTING GEAR (Ship or field)	23. UNDETERMINED
X 8. SUPERVISORY OTHER (Specify)	16. FACILITIES OTHER (Specify)	24. OTHER (Specify)

1. NAME (Last, first & middle initial) Pilot (at controls at time of accident) (b) (6)	2. GRADE 1Lt	3. SERVICE NO. (b) (6)	4. DATE OF BIRTH NA	5. DATE OF ENTRY INTO SERVICE USMC	6. AGE 26	7. GRADE 2	8. POSITION Co-Pilot Seat	9. GRADE Pilot	10. POSITION 8
CO-PILOT (at controls at time of accident) (b) (6)	11. GRADE Capt	12. SERVICE NO. (b) (6)	13. DATE OF BIRTH NA	14. DATE OF ENTRY INTO SERVICE USMC	15. AGE 32	16. GRADE 32	17. POSITION 32	18. GRADE 32	19. POSITION 32

SECTION C. PERSONNEL DATA				SECTION D. PILOT EXPERIENCE IN HOURS			
11. ALL MODELS				17. OF LANDING DAY/NIGHT			
12. ALL MODELS IN LAST 12 MONTHS				18. OF LANDING LAST 6 MONTHS			
13. ALL MODELS IN LAST 3 MONTHS				19. INSTRUMENT HOURS LAST 3 MONTHS			
14. ALL SERIES THIS MODEL				20. NIGHT HOURS LAST 3 MONTHS			
15. ALL SERIES THIS MODEL				21. TOTAL HOURS IN			
16. ALL SERIES THIS MODEL				22. LAST PROBABLY FLIGHT ALL SERVICE			
23. DATE GRADE LAST MATORS				24. TYPE INSTRUMENT CARD			
25. DATE GRADE LAST MATORS				26. STANDARD			
27. DATE GRADE LAST MATORS				28. STANDARD			
29. DATE GRADE LAST MATORS				30. STANDARD			
31. DATE GRADE LAST MATORS				32. STANDARD			
33. DATE GRADE LAST MATORS				34. STANDARD			
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95. DATE GRADE LAST MATORS				96. STANDARD			
97. DATE GRADE LAST MATORS				98. STANDARD			
99. DATE GRADE LAST MATORS				100. STANDARD			

ORIGINAL

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1A (Rev. 3-63) Page 1A

SPECIAL HANDLING REQUIRED in accordance with
Para. 66, OPNAV INSTRUCTION 3750.6, effective edition

OPNAV REPORT 3750-1

PART I GENERAL			
1. AIRCRAFT ACCIDENT BOARD APPOINTED BY CG, FMAW	2. SERIAL NO. 1-65A	3. DTG LOCAL OF MISHAP 241007:56H	4. MODEL AIRCRAFT KC-130F
5. BUREAU NUMBER 149802		6. DAMAGE	
7. LOCATION OF MISHAP			
8. TO: Commander, Naval Aviation Safety Center		9. TIME OF DAY	
10. TIME IN FLIGHT		11. FLIGHT CODE	
12. VIA:		13. TIME OF DAY	
14. CLEARED FROM		15. TYPE CLEARANCE	
16. AIRSPEED		17. A/C WEIGHT	
18. ELEVATION AT TIME OF MISHAP		19. ELEVATION AT TIME OF MISHAP	
20. BRIEF DESCRIPTION OF MISHAP		21. TERMIN	
22. LIST MODEL, BUND, REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (Complete OPS OF Form 3750-1 for each A/C)			

SECTION B. CONTRIBUTING FACTORS	
1. PILOT ERROR IN TECHNIQUE/JUDGMENT	2. PILOT DEVIATION FROM NATOPS PROCEDURES
3. PILOT INCORRECT OPERATION OF A/C SYSTEM	4. PILOT OTHER (Specify)
5. CREW	6. MAINTENANCE PERSONNEL
7. MAINTENANCE SUPERVISORY PERSONNEL	8. SUPERVISORY OTHER (Specify)
9. SERVING PERSONNEL	10. LANDING SIGNAL OFFICER
11. OTHER PERSONNEL (Specify)	12. ADMINISTRATIVE
13. FACILITIES-RUNWAY, OVERRUN TAXIWAY, FLIGHT DECK	14. FACILITIES-NAV AIDS, LANDING AIDS (VOR, GCA, ILS, HIRVOR)
15. FACILITIES-CATAPULT, ARRESTING GEAR (Ship or field)	16. FACILITIES OTHER (Specify)
17. WEATHER	18. DESIGN AIRCRAFT
19. DESIGN CREW EQUIPMENT	20. DESIGN OTHER (Specify)
21. ROLLING/POWCHING DECK ROUGH SEAS	22. MATERIAL FAILURE/MALFUNCTION
23. UNDETERMINED	24. OTHER (Specify)

SECTION C. PERSONNEL DATA	
1. NAME (Last, first & middle initial) PILOT (at controls at time of mishap)	2. GRADE 3. SERVICE NO. 4. DESIG 5. BRANCH OF SERVICE 6. REL 7. GRADE 8. SERVICE NO. 9. DESIG 10. BRANCH OF SERVICE 11. REL 12. GRADE 13. SERVICE NO. 14. DESIG 15. BRANCH OF SERVICE 16. REL 17. GRADE 18. SERVICE NO. 19. DESIG 20. BRANCH OF SERVICE 21. REL 22. GRADE 23. SERVICE NO. 24. DESIG 25. BRANCH OF SERVICE 26. REL 27. GRADE 28. SERVICE NO. 29. DESIG 30. BRANCH OF SERVICE 31. REL 32. GRADE 33. SERVICE NO. 34. DESIG 35. BRANCH OF SERVICE 36. REL 37. GRADE 38. SERVICE NO. 39. DESIG 40. BRANCH OF SERVICE 41. REL 42. GRADE 43. SERVICE NO. 44. DESIG 45. BRANCH OF SERVICE 46. REL 47. GRADE 48. SERVICE NO. 49. DESIG 50. BRANCH OF SERVICE 51. REL 52. GRADE 53. SERVICE NO. 54. DESIG 55. BRANCH OF SERVICE 56. REL 57. GRADE 58. SERVICE NO. 59. DESIG 60. BRANCH OF SERVICE 61. REL 62. GRADE 63. SERVICE NO. 64. DESIG 65. BRANCH OF SERVICE 66. REL 67. GRADE 68. SERVICE NO. 69. DESIG 70. BRANCH OF SERVICE 71. REL 72. 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DESIG 285. BRANCH OF SERVICE 286. REL 287. GRADE 288. SERVICE NO. 289. DESIG 290. BRANCH OF SERVICE 291. REL 292. GRADE 293. SERVICE NO. 294. DESIG 295. BRANCH OF SERVICE 296. REL 297. GRADE 298. SERVICE NO. 299. DESIG 300. BRANCH OF SERVICE 301. REL 302. GRADE 303. SERVICE NO. 304. DESIG 305. BRANCH OF SERVICE 306. REL 307. GRADE 308. SERVICE NO. 309. DESIG 310. BRANCH OF SERVICE 311. REL 312. GRADE 313. SERVICE NO. 314. DESIG 315. BRANCH OF SERVICE 316. REL 317. GRADE 318. SERVICE NO. 319. DESIG 320. BRANCH OF SERVICE 321. REL 322. GRADE 323. SERVICE NO. 324. DESIG 325. BRANCH OF SERVICE 326. REL 327. GRADE 328. SERVICE NO. 329. DESIG 330. BRANCH OF SERVICE 331. REL 332. GRADE 333. SERVICE NO. 334. DESIG 335. BRANCH OF SERVICE 336. REL 337. GRADE 338. SERVICE NO. 339. DESIG 340. BRANCH OF SERVICE 341. REL 342. GRADE 343. SERVICE NO. 344. DESIG 345. BRANCH OF SERVICE 346. REL 347. GRADE 348. SERVICE NO. 349. DESIG 350. BRANCH OF SERVICE 351. REL 352. GRADE 353. SERVICE NO. 354. DESIG 355. BRANCH OF SERVICE 356. REL 357. GRADE 358. SERVICE NO. 359. DESIG 360. BRANCH OF SERVICE 361. REL 362. GRADE 363. SERVICE NO. 364. DESIG 365. BRANCH OF SERVICE 366. REL 367. GRADE 368. SERVICE NO. 369. DESIG 370. BRANCH OF SERVICE 371. REL 372. GRADE 373. SERVICE NO. 374. DESIG 375. BRANCH OF SERVICE 376. REL 377. GRADE 378. SERVICE NO. 379. DESIG 380. BRANCH OF SERVICE 381. REL 382. GRADE 383. SERVICE NO. 384. DESIG 385. BRANCH OF SERVICE 386. REL 387. GRADE 388. SERVICE NO. 389. DESIG 390. BRANCH OF SERVICE 391. REL 392. GRADE 393. SERVICE NO. 394. DESIG 395. BRANCH OF SERVICE 396. REL 397. GRADE 398. SERVICE NO. 399. DESIG 400. BRANCH OF SERVICE 401. REL 402. GRADE 403. SERVICE NO. 404. DESIG 405. BRANCH OF SERVICE 406. REL 407. GRADE 408. SERVICE NO. 409. DESIG 410. BRANCH OF SERVICE 411. REL 412. GRADE 413. SERVICE NO. 414. DESIG 415. BRANCH OF SERVICE 416. REL 417. GRADE 418. SERVICE NO. 419. DESIG 420. BRANCH OF SERVICE 421. REL 422. GRADE 423. SERVICE NO. 424. DESIG 425. BRANCH OF SERVICE 426. REL 427. GRADE 428. SERVICE NO. 429. DESIG 430. BRANCH OF SERVICE 431. REL 432. GRADE 433. SERVICE NO. 434. DESIG 435. BRANCH OF SERVICE 436. REL 437. GRADE 438. SERVICE NO. 439. DESIG 440. BRANCH OF SERVICE 441. REL 442. GRADE 443. SERVICE NO. 444. DESIG 445. BRANCH OF SERVICE 446. REL 447. GRADE 448. SERVICE NO. 449. DESIG 450. BRANCH OF SERVICE 451. REL 452. GRADE 453. SERVICE NO. 454. DESIG 455. BRANCH OF SERVICE 456. REL 457. GRADE 458. SERVICE NO. 459. DESIG 460. BRANCH OF SERVICE 461. REL 462. GRADE 463. SERVICE NO. 464. DESIG 465. BRANCH OF SERVICE 466. REL 467. GRADE 468. SERVICE NO. 469. DESIG 470. BRANCH OF SERVICE 471. REL 472. GRADE 473. SERVICE NO. 474. DESIG 475. BRANCH OF SERVICE 476. REL 477. GRADE 478. SERVICE NO. 479. DESIG 480. BRANCH OF SERVICE 481. REL 482. GRADE 483. SERVICE NO. 484. DESIG 485. BRANCH OF SERVICE 486. REL 487. GRADE 488. SERVICE NO. 489. DESIG 490. BRANCH OF SERVICE 491. REL 492. GRADE 493. SERVICE NO. 494. DESIG 495. BRANCH OF SERVICE 496. REL 497. GRADE 498. SERVICE NO. 499. DESIG 500. BRANCH OF SERVICE 501. REL 502. GRADE 503. SERVICE NO. 504. DESIG 505. BRANCH OF SERVICE 506. REL 507. GRADE 508. SERVICE NO. 509. DESIG 510. BRANCH OF SERVICE 511. REL 512. GRADE 513. SERVICE NO. 514. DESIG 515. BRANCH OF SERVICE 516. REL 517. GRADE 518. SERVICE NO. 519. DESIG 520. BRANCH OF SERVICE 521. REL 522. GRADE 523. SERVICE NO. 524. DESIG 525. BRANCH OF SERVICE 526. REL 527. GRADE 528. SERVICE NO. 529. DESIG 530. BRANCH OF SERVICE 531. REL 532. GRADE 533. SERVICE NO. 534. DESIG 535. BRANCH OF SERVICE 536. REL 537. GRADE 538. SERVICE NO. 539. DESIG 540. BRANCH OF SERVICE 541. REL 542. GRADE 543. SERVICE NO. 544. DESIG 545. BRANCH OF SERVICE 546. REL 547. GRADE 548. SERVICE NO. 549. DESIG 550. BRANCH OF SERVICE 551. REL 552. GRADE 553. SERVICE NO. 554. DESIG 555. BRANCH OF SERVICE 556. REL 557. GRADE 558. SERVICE NO. 559. DESIG 560. BRANCH OF SERVICE 561. REL 562. GRADE 563. SERVICE NO. 564. DESIG 565. BRANCH OF SERVICE 566. REL 567. GRADE 568. SERVICE NO. 569. DESIG 570. BRANCH OF SERVICE 571. REL 572. GRADE 573. SERVICE NO. 574. DESIG 575. BRANCH OF SERVICE 576. REL 577. GRADE 578. SERVICE NO. 579. DESIG 580. BRANCH OF SERVICE 581. REL 582. GRADE 583. SERVICE NO. 584. DESIG 585. BRANCH OF SERVICE 586. REL 587. GRADE 588. SERVICE NO. 589. DESIG 590. BRANCH OF SERVICE 591. REL 592. GRADE 593. SERVICE NO. 594. DESIG 595. BRANCH OF SERVICE 596. REL 597. GRADE 598. SERVICE NO. 599. DESIG 600. BRANCH OF SERVICE 601. REL 602. GRADE 603. SERVICE NO. 604. DESIG 605. BRANCH OF SERVICE 606. REL 607. GRADE 608. SERVICE NO. 609. DESIG 610. BRANCH OF SERVICE 611. REL 612. GRADE 613. SERVICE NO. 614. DESIG 615. BRANCH OF SERVICE 616. REL 617. GRADE 618. SERVICE NO. 619. DESIG 620. BRANCH OF SERVICE 621. REL 622. GRADE 623. SERVICE NO. 624. DESIG 625. BRANCH OF SERVICE 626. REL 627. GRADE 628. SERVICE NO. 629. DESIG 630. BRANCH OF SERVICE 631. REL 632. GRADE 633. SERVICE NO. 634. DESIG 635. BRANCH OF SERVICE 636. REL 637. GRADE 638. SERVICE NO. 639. DESIG 640. BRANCH OF SERVICE 641. REL 642. GRADE 643. SERVICE NO. 644. DESIG 645. BRANCH OF SERVICE 646. REL 647. GRADE 648. SERVICE NO. 649. DESIG 650. BRANCH OF SERVICE 651. REL 652. GRADE 653. SERVICE NO. 654. DESIG 655. BRANCH OF SERVICE 656. REL 657. GRADE 658. SERVICE NO. 659. DESIG 660. BRANCH OF SERVICE 661. REL 662. GRADE 663. SERVICE NO. 664. DESIG 665. BRANCH OF SERVICE 666. REL 667. GRADE 668. SERVICE NO. 669. DESIG 670. BRANCH OF SERVICE 671. REL 672. GRADE 673. SERVICE NO. 674. DESIG 675. BRANCH OF SERVICE 676. REL 677. GRADE 678. SERVICE NO. 679. DESIG 680. BRANCH OF SERVICE 681. REL 682. GRADE 683. SERVICE NO. 684. DESIG 685. BRANCH OF SERVICE 686. REL 687. GRADE 688. SERVICE NO. 689. DESIG 690. BRANCH OF SERVICE 691. REL 692. GRADE 693. SERVICE NO. 694. DESIG 695. BRANCH OF SERVICE 696. REL 697. GRADE 698. SERVICE NO. 699. DESIG 700. BRANCH OF SERVICE 701. REL 702. GRADE 703. SERVICE NO. 704. DESIG 705. BRANCH OF SERVICE 706. REL 707. GRADE 708. SERVICE NO. 709. DESIG 710. BRANCH OF SERVICE 711. REL 712. GRADE 713. SERVICE NO. 714. DESIG 715. BRANCH OF SERVICE 716. REL 717. GRADE 718. SERVICE NO. 719. DESIG 720. BRANCH OF SERVICE 721. REL 722. GRADE 723. SERVICE NO. 724. DESIG 725. BRANCH OF SERVICE 726. REL 727. GRADE 728. SERVICE NO. 729. DESIG 730. BRANCH OF SERVICE 731. REL 732. GRADE 733. SERVICE NO. 734. DESIG 735. BRANCH OF SERVICE 736. REL 737. GRADE 738. SERVICE NO. 739. DESIG 740. BRANCH OF SERVICE 741. REL 742. GRADE 743. SERVICE NO. 744. DESIG 745. BRANCH OF SERVICE 746. REL 747. GRADE 748. SERVICE NO. 749. DESIG 750. BRANCH OF SERVICE 751. REL 752. GRADE 753. SERVICE NO. 754. DESIG 755. BRANCH OF SERVICE 756. REL 757. GRADE 758. SERVICE NO. 759. DESIG 760. BRANCH OF SERVICE 761. REL 762. GRADE 763. SERVICE NO. 764. DESIG 765. BRANCH OF SERVICE 766. REL 767. GRADE 768. SERVICE NO. 769. DESIG 770. BRANCH OF SERVICE 771. REL 772. GRADE 773. SERVICE NO. 774. DESIG 775. BRANCH OF SERVICE 776. REL 777. GRADE 778. SERVICE NO. 779. DESIG 780. BRANCH OF SERVICE 781. REL 782. GRADE 783. SERVICE NO. 784. DESIG 785. BRANCH OF SERVICE 786. REL 787. GRADE 788. SERVICE NO. 789. DESIG 790. BRANCH OF SERVICE 791. REL 792. GRADE 793. SERVICE NO. 794. DESIG 795. BRANCH OF SERVICE 796. REL 797. GRADE 798. SERVICE NO. 799. DESIG 800. BRANCH OF SERVICE 801. REL 802. GRADE 803. SERVICE NO. 804. DESIG 805. BRANCH OF SERVICE 806. REL 807. GRADE 808. SERVICE NO. 809. DESIG 810. BRANCH OF SERVICE 811. REL 812. GRADE 813. SERVICE NO. 814. DESIG 815. BRANCH OF SERVICE 816. REL 817. GRADE 818. SERVICE NO. 819. DESIG 820. BRANCH OF SERVICE 821. REL 822. GRADE 823. SERVICE NO. 824. DESIG 825. BRANCH OF SERVICE 826. REL 827. GRADE 828. SERVICE NO. 829. DESIG 830. BRANCH OF SERVICE 831. REL 832. GRADE 833. SERVICE NO. 834. DESIG 835. BRANCH OF SERVICE 836. REL 837. GRADE 838. SERVICE NO. 839. DESIG 840. BRANCH OF SERVICE 841. REL 842. GRADE 843. SERVICE NO. 844. DESIG 845. BRANCH OF SERVICE 846. REL 847. GRADE 848. SERVICE NO. 849. DESIG 850. BRANCH OF SERVICE 851. REL 852. GRADE 853. SERVICE NO. 854. DESIG 855. BRANCH OF SERVICE 856. REL 857. GRADE 858. SERVICE NO. 859. DESIG 860. BRANCH OF SERVICE 861. REL 862. GRADE 863. SERVICE NO. 864. DESIG 865. BRANCH OF SERVICE 866. REL 867. GRADE 868. SERVICE NO. 869. DESIG 870. BRANCH OF SERVICE 871. REL 872. GRADE 873. SERVICE NO. 874. DESIG 875. BRANCH OF SERVICE 876. REL 877. GRADE 878. SERVICE NO. 879. DESIG 880. BRANCH OF SERVICE 881. REL 882. GRADE 883. SERVICE NO. 884. DESIG 885. BRANCH OF SERVICE 886. REL 887. GRADE 888. SERVICE NO. 889. DESIG 890. BRANCH OF SERVICE 891. REL 892. GRADE 893. SERVICE NO. 894. DESIG 895. BRANCH OF SERVICE 896. REL 897. GRADE 898. SERVICE NO. 899. DESIG 900. BRANCH OF SERVICE 901. REL 902. GRADE 903. SERVICE NO. 904. DESIG 905. BRANCH OF SERVICE 906. REL 907. GRADE 908. SERVICE NO. 909. DESIG 910. BRANCH OF SERVICE 911. REL 912. GRADE 913. SERVICE NO. 914. DESIG 915. BRANCH OF SERVICE 916. REL 917. GRADE 918. SERVICE NO. 919. DESIG 920. BRANCH OF SERVICE 921. REL 922. GRADE 923. SERVICE NO. 924. DESIG 925. BRANCH OF SERVICE 926. REL 927. GRADE 928. SERVICE NO. 929. DESIG 930. BRANCH OF SERVICE 931. REL 932. GRADE 933. SERVICE NO. 934. DESIG 935. BRANCH OF SERVICE 936. REL 937. GRADE 938. SERVICE NO. 939. DESIG 940. BRANCH OF SERVICE 941. REL 942. GRADE 943. SERVICE NO. 944. DESIG 945. BRANCH OF SERVICE 946. REL 947. GRADE 948. SERVICE NO. 949. DESIG 950. BRANCH OF SERVICE 951. REL 952. GRADE 953. SERVICE NO. 954. DESIG 955. BRANCH OF SERVICE 956. REL 957. GRADE 958. SERVICE NO. 959. DESIG 960. BRANCH OF SERVICE 961. REL 962. GRADE 963. SERVICE NO. 964. DESIG 965. BRANCH OF SERVICE 966. REL 967. GRADE 968. SERVICE NO. 969. DESIG 970. BRANCH OF SERVICE 971. REL 972. GRADE 973. SERVICE NO. 974. DESIG 975. BRANCH OF SERVICE 976. REL 977. GRADE 978. SERVICE NO. 979. DESIG 980. BRANCH OF SERVICE 981. REL 982. GRADE 983. SERVICE NO. 984. DESIG 985. BRANCH OF SERVICE 986. REL 987. GRADE 988. SERVICE NO. 989. DESIG 990. BRANCH OF SERVICE 991. REL 992. GRADE 993. SERVICE NO. 994. DESIG 995. BRANCH OF SERVICE 996. REL 997. GRADE 998. SERVICE NO. 999. DESIG 1000. BRANCH OF SERVICE 1001. REL 1002. GRADE 1003. SERVICE NO. 1004. DESIG 1005. BRANCH OF SERVICE 1006. REL 1007. GRADE 1008. SERVICE NO. 1009. DESIG 1010. BRANCH OF SERVICE 1011. REL 1012. GRADE 1013. SERVICE NO. 1014. DESIG 1015. BRANCH OF SERVICE 1016. REL 1017. GRADE 1018. SERVICE NO. 1019. DESIG 1020. BRANCH OF SERVICE 1021. REL 1022. GRADE 1023. SERVICE NO. 1024. DESIG 1025. BRANCH OF SERVICE 1026. REL 1027. GRADE 1028. SERVICE NO. 1029. DESIG 1030. BRANCH OF SERVICE 1031. REL 1032. GRADE 1033. SERVICE NO. 1034. DESIG 1035. BRANCH OF SERVICE 1036. REL 1037. GRADE 1038. SERVICE NO. 1039. DESIG 1040. BRANCH OF SERVICE 1041. REL 1042. GRADE 1043. SERVICE NO. 1044. DESIG 1045. BRANCH OF SERVICE 1046. REL 1047. GRADE 1048. SERVICE NO. 1049. DESIG 1050. BRANCH OF SERVICE 1051. REL 1052. GRADE 1053. SERVICE NO. 1054. DESIG 1055. BRANCH OF SERVICE 1056. REL 1057. GRADE 1058. SERVICE NO. 1059. DESIG 1060. BRANCH OF SERVICE 1061. REL 1062. GRADE 1063. SERVICE NO. 1064. DESIG 1065. BRANCH OF SERVICE 1066. REL 1067. GRADE 1068. SERVICE NO. 1069. DESIG 1070. BRANCH OF SERVICE 1071. REL 1072. GRADE 1073. SERVICE NO. 1074. DESIG 1075. BRANCH OF SERVICE 1076. REL 1077. GRADE 1078. SERVICE NO. 1079. DESIG 1080. BRANCH OF SERVICE 1081. REL 1082. GRADE 1083. SERVICE NO. 1084. DESIG 1085. BRANCH OF SERVICE 1086. REL 1087. GRADE 1088. SERVICE NO. 1089. DESIG 1090. BRANCH OF SERVICE 1091. REL 1092. GRADE 1093. SERVICE NO. 1094. DESIG 1095. BRANCH OF SERVICE 1096. REL 1097. GRADE 1098. SERVICE NO. 1099. DESIG 1100. BRANCH OF SERVICE 1101. REL 1102. GRADE 1103. SERVICE NO. 1104. DESIG 1105. BRANCH OF SERVICE 1106. REL 1107. GRADE 1108. SERVICE NO. 1109. DESIG 1110. BRANCH OF SERVICE 1111. REL 1112. GRADE 1113. SERVICE NO. 1114. DESIG 1115. BRANCH OF SERVICE 1116. REL 1117. GRADE 1118. SERVICE NO. 1119. DESIG 1120. BRANCH OF SERVICE 1121. REL 1122. GRADE 1123. SERVICE NO. 1124. DESIG 1125. BRANCH OF SERVICE 1126. REL 1127. GRADE 1128. SERVICE NO. 1129. DESIG 1130. BRANCH OF SERVICE 1131. REL 1132. GRADE 1133. SERVICE NO. 1134. DESIG 1135. BRANCH OF SERVICE 1136. REL 1137. GRADE 1138. SERVICE NO. 1139. DESIG 1140. BRANCH OF SERVICE 1141. REL 1142. GRADE 1143. SERVICE NO. 1144. DESIG 1145. BRANCH OF SERVICE 1146. REL 1147. GRADE 1148. SERVICE NO. 1149. DESIG 1150. BRANCH OF SERVICE 1151. REL 1152. GRADE 1153. SERVICE NO. 1154. DESIG 1155. BRANCH OF SERVICE 1156. REL 1157. GRADE 1158. SERVICE NO. 1159. DESIG 1160. BRANCH OF SERVICE 1161. REL 1162. GRADE 1163. SERVICE NO. 1164. DESIG 1165. BRANCH OF SERVICE 1166. REL 1167. GRADE 1168. SERVICE NO. 1169. DESIG 1170. BRANCH OF SERVICE 1171. REL 1172. GRADE 1173. SERVICE NO. 1174. DESIG 1175. BRANCH OF SERVICE 1176. REL 1177. GRADE 1178. SERVICE NO. 1179. DESIG 1180. BRANCH OF SERVICE 1181. REL 1182. GRADE 1183. SERVICE NO. 1184. DESIG 1185. BRANCH OF SERVICE 1186. REL 1187. GRADE 1188. SERVICE NO. 1189. DESIG 1190. BRANCH OF SERVICE 1191. REL 1192. GRADE 1193. SERVICE NO. 1194. DESIG 1195. BRANCH OF SERVICE 1196. REL 1197. GRADE 1198. SERVICE NO. 1199. DESIG 1200. BRANCH OF SERVICE 1201. REL 1202. GRADE 1203. SERVICE NO. 1204. DESIG 1205. BRANCH OF SERVICE 1206. REL 1207. GRADE 1208. SERVICE NO. 1209. DESIG 1210. BRANCH OF SERVICE 1211. REL 1212. GRADE 1213. SERVICE NO. 1214. DESIG 1215. BRANCH OF SERVICE 1216. REL 1217. GRADE 1218. SERVICE NO. 1219. DESIG 1220. BRANCH OF SERVICE 1221. REL 1222. GRADE 1223. SERVICE NO. 1224. DESIG 1225. BRANCH OF SERVICE 1226. REL 1227. GRADE 1228. SERVICE NO. 1229. DESIG 1230. BRANCH OF SERVICE 1231. REL 1232. GRADE 1233. SERVICE NO. 1234. DESIG 1235. BRANCH OF SERVICE 1236. REL 1237. GRADE 1238. SERVICE NO. 1239. DESIG 1240. BRANCH OF SERVICE 1241. REL 1242. GRADE 1243. SERVICE NO. 1244. DESIG 1245. BRANCH OF SERVICE 1246. REL 1247. GRADE 1248. SERVICE NO. 1249. DESIG 1250. BRANCH OF SERVICE 1251. REL 1252. GRADE 1253. SERVICE NO. 1254. DESIG 1255. BRANCH OF SERVICE 1256. REL 1257. GRADE 1258. SERVICE NO. 1259. DESIG 1260. BRANCH OF SERVICE 1261. REL 1262. GRADE 1263. SERVICE NO. 1264. DESIG 1265. BRANCH OF SERVICE 1266. REL 1267. GRADE 1268. SERVICE NO. 1269. DESIG 1270. BRANCH OF SERVICE 1271. REL 1272. GRADE 1273. SERVICE NO. 1274. DESIG 1275. BRANCH OF SERVICE 1276. REL 1277. GRADE 1278. SERVICE NO. 1279. DESIG 1280. BRANCH OF SERVICE 1281. REL 1282. GRADE 1283. SERVICE NO. 1284. DESIG 1285. BRANCH OF SERVICE

PERSONNEL ABOARD C-130F 149802 ON 24 AUGUST 1965

NAME	RANK	SERIAL NO.	UNIT	POSITION	Injury Code
BLEXRUDE, Gordon N.	Sgt	(b) (6)	VMGR-152	Crew	A
GERRY, Jerry L.	Cpl	(b) (6)	VMGR-152	Crew	A
(b) (6)	LCpl	(b) (6)	3dMarDiv	Passenger	D
(b) (6)	PFC	(b) (6)	3dMarDiv	Passenger	D
(b) (6)	UTG-2	(b) (6)	30thNCR	Passenger	D
(b) (6)	PFC	(b) (6)	3dMarDiv	Passenger	E
(b) (6)	LCpl	(b) (6)	3dMarDiv	Passenger	F
(b) (6)	1stLt	(b) (6)	3dMarDiv	Passenger	D
(b) (6)	PFC	(b) (6)	3dMarDiv	Passenger	F
(b) (6)	PFC	(b) (6)	3dMarDiv	Passenger	D
(b) (6)	PFC	(b) (6)	3dMarDiv	Passenger	E
BRAZEN, Harold J.	LCpl	(b) (6)	MAFS-12	Passenger	A
CLANCY, Joseph A.	LCpl	(b) (6)	MWHG-1	Passenger	A
RUDEEN, Paul E. Jr.	1stLt	(b) (6)	1stMAW	Passenger	A
POVEY, John T.	Cpl	(b) (6)	MWHG-1	Passenger	A
RUNKEL, Ronald L.	LCpl	(b) (6)	MAFS-12	Passenger	A
SHOUP, William K.	LCpl	(b) (6)	1stMAW	Passenger	A
WAFFORD, Ronald L.	LCpl	(b) (6)	MAG-11	Passenger	A
WALLACE, Richard F.	Capt	(b) (6)	MAG-11	Passenger	A
BACKEN, Dennis D.	PFC	(b) (6)	MAG-11	Passenger	A
LA PORTE, Dahl J.	Sgt	(b) (6)	MAG-11	Passenger	A
ARNOLD, Major Jr.	LCpl	(b) (6)	3dMarDiv	Passenger	A
BURNELIE, Joseph E.	LCpl	(b) (6)	3dMarDiv	Passenger	A
BURTON, Cecil W.	LCpl	(b) (6)	3dMarDiv	Passenger	A
CROW, Thomas M.	PFC	(b) (6)	3dMarDiv	Passenger	A
DAVIS, Ronald L.	LCpl	(b) (6)	3dMarDiv	Passenger	A
DEGROOT, Maarten NMH	LCpl	(b) (6)	3dMarDiv	Passenger	A
EFAM, Robert T.	HM	(b) (6)	3dMarDiv	Passenger	A
FRANKHAUSER, Carroll E.	LCpl	(b) (6)	3dMarDiv	Passenger	A
FORD, Joseph A. III	LCpl	(b) (6)	3dMarDiv	Passenger	A
GIVEN, Frank A.	PFC	(b) (6)	3dMarDiv	Passenger	A
HAMBLETON, Barry N.	PFC	(b) (6)	3dMarDiv	Passenger	A
HANSEN, Donald B.	LCpl	(b) (6)	3dMarDiv	Passenger	A
HARTSOCK, Lonnie D.	LCpl	(b) (6)	3dMarDiv	Passenger	A
HEINZE, Kelly K.	SSgt	(b) (6)	3dMarDiv	Passenger	A
JOHNSON, Gerald V.	Sgt	(b) (6)	3dMarDiv	Passenger	A
JOSENDAL, Richard L.	LCpl	(b) (6)	3dMarDiv	Passenger	A
LAKE, John W.	Cpl	(b) (6)	3dMarDiv	Passenger	A
LEAF, Jack B.	PFC	(b) (6)	3dMarDiv	Passenger	A
MARTIN, Dennis R.	PFC	(b) (6)	3dMarDiv	Passenger	A
MASSEY, James	Sgt	(b) (6)	3dMarDiv	Passenger	A
MCCARTNEY, Harry C.	LCpl	(b) (6)	3dMarDiv	Passenger	A
MESA, Ricardo	Pvt	(b) (6)	3dMarDiv	Passenger	A
WILLIS, Richard A.	LCpl	(b) (6)	3dMarDiv	Passenger	A
MICHEL, John S.	PFC	(b) (6)	3dMarDiv	Passenger	A
MONAHAN, Edward J. Jr.	LCpl	(b) (6)	3dMarDiv	Passenger	A
MYERS, Grat G. Jr.	Cpl	(b) (6)	3dMarDiv	Passenger	A
NEY, David C.	LCpl	(b) (6)	3dMarDiv	Passenger	A
O'KANE, James B.	LCpl	(b) (6)	3dMarDiv	Passenger	A
PFEFFERLE, Warren W.	PFC	(b) (6)	3dMarDiv	Passenger	A
ROLAND, John P.	LCpl	(b) (6)	3dMarDiv	Passenger	A

NAME	RANK	SERIAL NO.	UNIT	POSITION	Injury Code
SANDERS, Jerry T.	LCpl	(b) (6)	3dMarDiv	Passenger	A
SMITH, Richard	Cpl	(b) (6)	3dMarDiv	Passenger	A
THOMPSON, Otho T.	Cpl	(b) (6)	3dMarDiv	Passenger	A
VOTAVA, James J. Jr.	LCpl	(b) (6)	3dMarDiv	Passenger	A
WIEST, Donald R.	LCpl	(b) (6)	3dMarDiv	Passenger	A
POWELL, Ronald L.	LCpl	(b) (6)	3dMarDiv	Passenger	A
CRIMES, Garry W.	BURON	(b) (6)	MCE-9	Passenger	A
LATHROPE, Robert M.	BURON	(b) (6)	MCE-9	Passenger	A
SACEN, Thomas A.	BURON	(b) (6)	MCE-9	Passenger	A
VAN WYK, John H.	BURON	(b) (6)	MCE-9	Passenger	A
BERTOMEN, Marcisco, Jr.	LCpl	(b) (6)	3dMarDiv	Passenger	A
CHASE, Terry A.	PFC	(b) (6)	3dMarDiv	Passenger	A
DAYRINGER, Harold V.	LCpl	(b) (6)	3dMarDiv	Passenger	A
GILFORD, James A.	Cpl	(b) (6)	3dMarDiv	Passenger	A
KUZMANKO, Robert J.	LCpl	(b) (6)	3dMarDiv	Passenger	A
RODRIGUEZ, Felix	LCpl	(b) (6)	3dMarDiv	Passenger	A

CERTIFIED TO BE A TRUE COPY

(b) (6)

LtCol USMC ASO

1 c
SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66, OPNAVINST F3750.6E

ENCLOSURE ()

PART II MAINTENANCE, MATERIAL, AND FACILITIES DATA									
1. DATE OF MANUFACTURE	2. FLIGHT HRS SINCE ACCEPTANCE	3. NO. OF PAR/OVERHAUL	4. MONTHS SINCE LAST PAR/OVERHAUL	5. FLT. HRS SINCE LAST PAR/OVERHAUL	6. LAST/PART OVERHAUL ACTIVITY	7. TYPE OF LAST CHECK PERFORMED	8. FLIGHT HOURS SINCE LAST CHECK	9. DAYS SINCE LAST CHECK	10. DAYS SINCE LAST CHECK
5/24/62	3172	1	21	1182	Lock-bed	2nd 100 hr.	50	13	

1. ENGINE MODEL	2. ENGINE SERIAL NUMBER	3. FLIGHT HRS SINCE ACCEPTANCE	4. NUMBER OF OVERHAULS	5. WAS DIR REQUESTED	6. FLT. HRS SINCE LAST OVERHAUL	7. LAST OVERHAUL ACTIVITY	8. TYPE OF LAST CHECK PERFORMED	9. FLIGHT HOURS SINCE LAST CHECK	10. DAYS SINCE LAST CHECK
(1) T-56 A-7	102473	2318	2	NO	382	Alameda NAS	2nd 100 hr.	50	13
(2)									
(3)									
(4)									

1. COMPONENT INVOLVED NOMENCLATURE	2. MANUFACTURER'S PART NUMBER	3. TOTAL HRS ON PART	4. NO. OF DIR MAJOR	5. HOURS SINCE LAST OVERHAUL	6. OVERHAUL ACTIVITY	7. WAS DIR REQUESTED	8. SER. NO. FUEL/AMP/USE
(1) Propeller Assembly	54H60-89	1624	0	0		NO	NO
(2)							
(3)							
(4)							

PARTS REPAIRED		3. DIRECT MANHOURS INVOLVED	PARTS REPLACED	
PART NUMBER	NOMENCLATURE		PART NUMBER	NOMENCLATURE

JET ENGINE FLAMEOUT (include intentional securing to prevent engine damage)													
AT TIME OF FLAMEOUT	1. ALTITUDE	2. IAS	3. RPM	4. EGT	5. MANEUVER AT TIME OF FLAMEOUT	6. FUEL FLOW	7. ATTITUDE						
8. G FORCES	9. RELIGHT	10. ALTITUDE	11. IAS	12. MAX EGT	13. FUEL CONTROL	14. NO. RELIGHT ATTEMPTS							
<input type="checkbox"/> ATTEMPTED <input type="checkbox"/> ACCOMPLISHED					<input type="checkbox"/> PRIMARY <input type="checkbox"/> MANUAL								
15. ENGINE SYMPTOMS	16. CAUSE OF SYMPTOMS												

RECIPROCATING ENGINE FAILURE													
17. ALTITUDE	18. IAS	19. ATTITUDE	20. RPM	21. MAP	22. TORQUE/INCH	23. FUEL FLOW PRESSURE	24. OIL PRESSURE						
25. ENGINE SYMPTOMS	26. CAUSE OF SYMPTOMS												

IDENTIFY OTHER REPORTS CONCERNING THIS MIDSHIP			
1. AMPFUR SERIAL NUMBER			
2. DIR MESSAGE REQUEST DATE-TIME-GROUP			
3. OTHER			
4.			

SPECIAL HANDLING REQUIRED in accordance with

OPNAV FORM 3750-1A (Rev. 3-63) Page 3

FIG. 66. OPRAV INSTRUCTION 3750.6, effective edition

08.057

VMOR-152 AAR 1-65A involving KC-130F BURO 149802 occurring 24 August 1965
Pilot: (b) (6)

PART V - The Accident

1. On 24 August 1965, Captain (b) (6), Aircraft Commander and First Lieutenant (b) (6), Co-Pilot prepared for a flight in a KC-130F Bureau Number 149802. The flight purpose was to transport Sixty-Five servicemen returning from R and R from Hong Kong to Banang. The flight plan was filed for a departure time of 1000 local [Enclosure (2)]. Aircraft pre-flight was completed, passengers boarded, and the crew manned the following stations in the cockpit: Captain (b) (6), Co-Pilot's seat, First Lieutenant (b) (6), Pilot's seat, SSgt (b) (6), Flight Engineer's seat, SSgt (b) (6) acted as First Mechanic, and the Navigator and Radio Operator took their respective stations.

At approximately 0945 engine start was accomplished. Engine start and post start indications were normal. After receiving the proper clearances 1Lt (b) (6) taxied the aircraft into position on runway 13, set the parking brakes and initiated an engine run-up.

All throttles were advanced to full power position. Number 2, 3, and 4 engines were reported to perform normally and to be producing rated power, or approximately 12000 to 15000 inch pounds of torque [Enclosure (4)]. However, number one engine was observed to be overspeeding (Approximately 109% RPM). 1Lt (b) (6) and SSgt (b) (6) [Enclosures (3) and (4)] have indicated their impression that the maximum torque reading on this engine was 1200-2000 inch pounds; Captain (b) (6) and SSgt (b) (6) [Enclosures (2) and (5)] believe that the number one engine was developing approximately 5800 inch pounds of torque. Number one throttle was retarded and advanced at least three times with propeller overspeed and partial power resulting in each instance. 1Lt (b) (6) reports that during advance of the number 1 throttle from flight idle position to takeoff throttle position the fuel flow indicator would attain a reading of 1200 pounds then fall off to 800 pounds.

Flight Engineer (b) (6) attempted to regain normal RPM of the number one engine by selecting the MECHANICAL GOVERNING position of the number one propeller governor control switch but was unsuccessful. The number one propeller governor control switch was returned to the NORMAL GOVERNING and number two engine selected as a master engine. The propeller Resynchrophase Switch was placed to "RESYNC" and released in an attempt to slave the number one propeller RPM to the RPM of the master engine. This procedure was unsuccessful. The number one engine remained in an overspeed, partial power condition [Enclosure (4)].

The flight engineer informed Captain (b) (6) that he was unable to bring the RPM of the number one engine down to a normal operating speed [Enclosure (4)]. At this point, Captain (b) (6) announced that the takeoff would be made on three engines [Enclosures (2), (3) and (4)]. Without further briefing by any crew member, 1Lt (b) (6) commenced the takeoff roll with all four throttles in the takeoff or full power position. Number one engine remained in an overspeed partial power condition and the remaining engines were developing normal takeoff power.

The aircraft rolled approximately 2400 feet straight ahead and according to 1Lt (b) (6) attained a speed of 50-60 knots at which point the aircraft commenced to drift left with the pilot experiencing increasing difficulty in maintaining directional control, which he was attempting by the use of both nose wheel steering and rudder application [Enclosure (3)]. As the left swerve increased and Lt (b) (6) realized he could not maintain directional control he decided to abort the takeoff [Enclosure (3)]. At apparently the same time SSgt (b) (6) called "Abort" [Enclosures (3) and (4)]. Lt (b) (6) attempt to abort by retarding the throttles was almost entirely blocked by Captain (b) (6) who had his left hand backing up the throttles and permitted only a negligible reduction by Lt (b) (6) before returning the throttles to full

SPECIAL HANDLING REQUIRED in accordance with Para 66, QPNAV INST P3750.82

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

forward position. Simultaneously Captain (b) (6) commenced rotation of the aircraft by pulling back on the yoke [Enclosures (3) and (4)].

The aircraft left the runway in a nose high left turn after approximately 3800 feet of takeoff run [Enclosure (23)]. The aircraft rolled on the left main gear through the grass bordering the runway for a distance of 324 feet before becoming airborne [Enclosure (25)] after a total ground roll of 4124 feet. Immediately upon becoming airborne Captain (b) (6) applied full right rudder, full right aileron and attempted to lower the nose to gain airspeed [Enclosure (2)]. Altitude of the aircraft is estimated to be between 100 to 200 feet at this point [Enclosure (7)].

Captain (b) (6) had both hands on the control yoke and cannot recall exact power settings during flight. However, Lt (b) (6) and the flight engineer report that someone retarded number four throttle to FLIGHT IDLE and number three throttle was retarded to some position between TAKEOFF and FLIGHT IDLE [Enclosures (3) and (5)]. The nose of the airplane began a partial swing back to the right but was losing altitude. As airspeed decreased someone advanced number 3 and 4 throttles to full power [Enclosures (3) and (5)]. An instant later the left wing impacted a seawall shearing the outer left wing panel and aileron. Immediately thereafter the aircraft was observed to contact the water in a steep left wing down, nose down attitude. Fuel spillage from a ruptured aircraft tank ignited on the surface of the water and eventually engulfed the sinking aircraft in flames. The aircraft finally came to rest in a partially inverted right wing down position.

VNCR-152 AAR 1-65A involving KC-130F BUHO 149802 occurring 24 August 1965
Pilot: (b) (6)

PART VI - Damage to Aircraft

The aircraft sustained "ALPA" damage with nothing SALVAGEABLE upon recovery because of fire and salt water exposure. The aircraft was raised from the water and all sections and component parts recovered and accounted for except numbers one and four engines and numbers one, two and four propellers. Considerable separation and breakup of the wreckage occurred when the aircraft was raised from its initial resting place. The aircraft was raised from 30 feet of water and moved to the closest shore line estimated to be 200 feet. Divers and dragging operations with grappling hooks failed to find and/or locate the missing engines and propellers. Underwater visibility was poor and an under water layer of muck and silt estimated to be 2 feet in depth existed. Furthermore it is likely that the missing props may have been thrown hundreds of yards from the crash site.

The fire apparently started initially when the port wing pylon and wing tip struck a cement seawall rupturing the integral wet wing fuel cell spreading fuel over the surface of the water from the seawall to the port wing of the aircraft at the final impact point, a distance of about 200 feet. Within an estimated period of 45-60 seconds the fire spread to the aircraft with fire in the cabin section and cargo compartment.

Since the engine and propeller assembly, known to be malfunctioning prior to commencement to takeoff, was not recovered and no other components and/or assemblies were considered as contributing factors to the accident, nothing was forwarded to an O&R activity for DIR and/or further evaluation.

Since all wreckage raised was positioned on private property for removal of the deceased and since it was recognized very early that material failure was most unlikely as a primary cause of the accident, disposal of the wreckage was commenced upon removal of the deceased personnel and at the completion of a thorough visual inspection by the AAR Board, the FMFPac Safety Team and the Naval Aviation Safety Center Team. Disposal commenced on Sunday, 29 August and was completed on Tuesday, 31 August. All wreckage was loaded by barge and sea lifted, accompanied by a member of the AAR Board, to the designated dumping ground located between the islands of Siu Kan and Kau I Chau in forty (40) feet of water about five miles west of the crash site.

Diving operations by local and Royal Navy divers (from HMS Triumph) were continued the remainder of Tuesday, 24 August, Wednesday, Thursday and Friday with some success in locating bodies and some portions of the aircraft. Bottom dragging operations were carried out on 1 September with no further success.

CREW COMPARTMENT

Only one window was cracked, all seats were in place, and the pilot's and co-pilot's instrument panels were in place with very little crash damage. The overhead panel was completely intact and both the pilot's and co-pilot's side panels were complete with only water damage. The center pedestal, including the engine control quadrant, was in good condition as were the navigator's and radio operator's panels.

FUSELAGE DAMAGE

The NLG and aft NLG bulkhead were completely separated from the forward fuselage. The forward fuselage sides, floor structure, and equipment were separated and crushed from approximately FS 245 aft to approximately FS 357. The center wing section was twisted and separated from the main fuselage structure, and probably caused most of the damage to the forward left hand and lower fuselage area. The top of the fuselage from FS 100 to approximately FS 257 was intact with only minor structural damage above water level at FS 256.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.68

ORIGINAL

VMGR-152 AAR 1-55A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

The left MLG wheel well bulkhead was separated from the fuselage and wing structure but remained in its approximate relative position with one strut partially attached and one strut hanging by the torque strut.

The right MLG wheel well bulkheads separated at the lower, forward, and aft attach points and moved from its normal position, in respect to the center wing. The right MLG struts and wheels completely separated and floated free of the wreckage.

The right aft fuselage side wall (aft of the wheel well bulkhead) was completely torn away. The left aft fuselage side and top were intact but with extensive fire damage.

The empennage was in fair condition except for the right horizontal stabilizer which was severed at approximately HSS 130. The cargo ramp and the door were in place but severely twisted.

The cargo floor was broken and separated at approximately FS 357, with another bend and crack extending through fifty percent of the width at FS 497.

Fire had engulfed the left and bottom side of the aircraft after impact. The extent of damage was proportional to the time required for the structure to sink below the water level.

The right wing separated at approximately outer WS 144. This wing evidently failed on impact with the water.

The center wing, even though it was torn away from the fuselage, was in reasonably good condition with numbers two and three engines and nacelles intact. Leading edges, aft fairings, and flaps were severely damaged, however the main box structure was intact. The fuel cells had been ruptured in several places by structure from the wreckage.

The left wing was ruptured and broken off at approximately outer WS 200, just outboard of the number one engine nacelle. The wing failure occurred on contact with the seawall just prior to final impact with the water.

It is reiterated that some of the above damage could have occurred during salvage operations, however, the above represents our best estimate of damage incurred prior to commencement of salvage operations.

VMGR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

PART VII - Investigation and Analysis

A. General

The responsibility for conducting this AAR was assumed by the Commanding General, First Marine Aircraft Wing.

The Board convened at 0800, 25 August 1965 as only the Senior Member had arrived on the scene prior to that time.

Details of this accident in regard to material failure/malfunction must be mainly conjecture based on statements from the crew and other qualified personnel, as certain parts in question were not recovered. Impact damage to the aircraft must also be conjecture, as salvage operations began immediately in an effort to assist or recover the personnel in the aircraft. The major portion of the aircraft had already been lifted ashore before the arrival of the Board.

The personal safety equipment utilized by individuals aboard the aircraft consisted solely of safety belts; it is not standard procedure to require that life jackets be worn on overwater takeoffs and/or flights.

SAFETY BELTS - Insofar as safety belts are concerned, they appear to have functioned properly. Several survivors have indicated a momentary struggle to free themselves before realizing they were held in place by their safety belts. Upon realizing this they report being able to quickly and easily free themselves. Several bodies were recovered from within the fuselage still strapped in their seats having died from drowning and/or fire. Other bodies were recovered from outside the wreckage but with portions of the seats still strapped to them. Of paradoxical note is the fact that the only person aboard the aircraft who was not strapped in, SSgt (b) (6) the extra Flight Engineer, was at the bottom of the ladder leading to the passenger compartment at the moment of impact and was literally catapulted up and forward into the upper front right side of the crew compartment. From that point he scrambled back and pulled both life raft release handles, opened the escape hatch and exited the aircraft. He then returned twice partially into the aircraft and pulled the other Flight Engineer and the Co-Pilot to safety. On a third attempt to locate remaining crew members he was driven away by flames and the now completely flooded cockpit.

LIFE JACKETS - During the investigation various sources have suggested that the requirement to wear life jackets on all overwater takeoffs should be reinstituted. The Board finds no evidence of any casualty having drowned who could reasonably have been expected to be able to actuate a lifejacket and survive due to the use thereof. In fact it can be reasonably argued that in this type of crash with rapid sinking of the fuselage a passenger with an impact actuated lifejacket or prematurely actuated lifejacket because of panic could effectively eliminate further chances to free himself from the wreckage. The Board does not concur in any reinstitution of the practice of wearing lifejackets on all over water takeoffs.

SAFETY HATCHES - The use of the crew compartment safety hatch undoubtedly was responsible for the saving of the lives of several crew members. It was accessible and easily actuated. There is no evidence concerning utilization of the passenger compartment safety hatches. Passenger survivors do not know how they exited the aircraft. Neither do they remember ever being told where the escape hatches were or how to utilize them. It appears clear that no briefing was given to the passengers which provided sufficient and detailed explicit information on which to act in this respect.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

ORIGINAL

VMGR-152 AAR 1-55A involving KC-130F BUFO 149002 occurring 24 August 1965
Pilot: (b) (6)

B. PERSONNEL FACTORS

The Board finds Pilot error to be the primary cause of this accident.

1. PILOT FACTORS

a. Captain (b) (6)

The initial and perhaps overriding instance of pilot error was the poor judgement of Captain (b) (6) in deciding to takeoff under the conditions presented. He knew he had passengers aboard; he was clearly aware of the malfunctioning number one engine and/or propeller; he knew that his load was R&H passengers as opposed to priority war material; he knew Lt (b) (6) was an inexperienced pilot. In the face of all these factors, he decided to takeoff. During questioning by the Board his explanation for this decision was "I thought we could do it or I wouldn't have tried it". It doesn't appear that the consideration of having passengers aboard ever really crossed his mind other than as weight factor. The gross weight of the aircraft was approximately 115,000 pounds and knowing this was well within the aircraft's lift ability even on 3 engines, he apparently gave no further thought to the type of load.

Having made the erroneous decision to attempt takeoff, Captain (b) (6) again evidenced poor judgement in failing to brief the crew carefully on proper, as well as emergency, procedures during takeoff. He did not for instance, brief as to what conditions would warrant an abort. This in turn obviated any instructions as to individual duties during abort procedures to be effected in the event of emergencies on takeoff. Pilots of the unit, who were questioned, admit that after going through the standard check off list the words "Standard NATOPS Procedures" are used to cover the remainder of the briefing. It appears entirely possible that this habit pattern may account for (b) (6) failure to be more specific at this time when a specific and detailed briefing was virtually mandatory.

Captain (b) (6) next error was in permitting an inexperienced Co-Pilot to attempt an emergency condition takeoff (and it is an emergency procedure as clearly indicated by the NATOPS Manual and the Pilot's Handbook for the KC-130 both of which his background training clearly indicate he had been exposed to) rather than effecting a change of seats and attempting the takeoff himself. Captain (b) (6) explanation for this was, that in his opinion, Lt (b) (6) was a highly qualified and competent pilot and that he had full confidence in (b) (6) ability to accomplish this takeoff. Of possible bearing here, is the fact that in the transport program the policy of shifting seats on each succeeding leg has become so nearly gospel that it appears there may be many instances where Co-Pilots are in control in situations where careful adherence to good safety practices would dictate otherwise.

Captain (b) (6) then compounded this latterly related error by his failure to ensure that Lt (b) (6) utilized proper procedures in attempting the takeoff. (b) (6) admits that had he been in the left seat he would not have attempted the takeoff in the same manner. When asked to elaborate, he indicated he would have started the takeoff roll with more nearly symmetrical power application by reducing power on the number 4 engine then would have brought number 4 engine up to full power as increasing airspeed permitted ease of directional control. He did not agree that he would have feathered number one although it is clear that all commonly accepted procedures dictate that such should be done. He says he thought the engine would increase power during the roll and therefore would be of assistance to him. When questioned as to why he thought this, his answer indicated that since the Flight Engineer had previously been able to clear up discrepancies on number one, he thought they would be able to do it again here during the roll.

VNCR-192 AAR 1-65A involving KC-130F BUHO 140802 occurring 24 August 1965
Pilot: (b) (6)

As the takeoff roll progressed Captain (b) (6) again erred in preventing (b) (6) attempt to abort. Simultaneously, his action pulling the aircraft off the ground under the circumstances was further aggravation of the already committed errors and eliminated the final chance to save the situation. It may be that, considering the proximity of the water and his view from the right hand seat, he could perceive no alternative to trying to fly the aircraft out of the situation.

After becoming airborne whatever small chance remained to fly the airplane out of the situation was probably eliminated by (b) (6) application of full right rudder and full right aileron at the same time that someone reduced the power on number 3 and 4 engines. These actions undoubtedly induced drag at a moment when the aircraft was at a critical flying speed/drag ratio and caused the final stall of the aircraft. It is probably moot to criticize this latter action in view of the terrain facing the pilot and it is almost certain that any pilot would have done the same at this point.

The Board has made many inquiries in an attempt to gain a picture of Captain (b) (6) background and makeup in order to do everything possible to determine what could cause his massive departure from the norm. Prior to this accident (b) (6) has been viewed as a very capable and conservative pilot. His Squadron Commander has viewed him as one of the pilots least likely to take any chance or to deviate from accepted procedures. (b) (6) was one of LtCol (b) (6) students when going through C-130 school. (b) (5)

(b) (5) It is believed that Captain (b) (6) was aware to some extent of these complaints. They were also known by his Squadron Commander. (b) (5), (b) (6)
(b) (5)

Another factor to be considered in this case is the question of the influence of the Vietnamese War situation and the consequent sense of urgency and desire to fully support those efforts held by the majority of service personnel. The "can do" spirit is prevalent; the unit to which (b) (6) belongs has been flying well above its programmed utilization for several months. The unit has been hard pressed to carry out the commitments it has been given. Each airplane grounded, particularly away from its maintenance base, represents a hardship to some other crew who will have to take up the slack. To a certain type of person the decision to ground an airplane, under these circumstances, might be tempered by a feeling that to do so might subject him to criticism for increasing the already heavy burden of the unit. This could be aggravated if the possible grounding occurs in a commonly accepted desirable liberty location and the person involved is already sensitive to criticism.

One final matter for consideration is the fact that the tower cleared 802 to takeoff twice in a fairly short span of time. During this same time-frame the tower cleared an IAF fighter aircraft to land and (b) (6) feels he was being rushed. Each time the tower cleared 802, (b) (6) responded that they were rolling, although in reality they were working with the number one engine in an attempt to get it up to takeoff power.

(b) (5)

VMCR-152 AAR 1-65A involving KC-130F BUHQ 149602 occurring 24 August 1965

Pilot: (b) (6)

(b) (5), (b) (6)

b. Lieutenant (b) (6)

The Co-Pilot erred in commencing his takeoff in an improper manner and without questioning the Aircraft Commander's decision. No one questions the relative authority of the Aircraft Commander to make the final decision as to whether takeoff would be attempted. Nevertheless Lt (b) (6) knew he had never made a takeoff under these conditions; could be reasonably expected to recognize the gravity of the situation and therefore could be expected to offer a demurrer of some extent. The Board recognizes the reluctance of inexperienced Co-Pilots to question the decisions of experienced Aircraft Commanders; we do not find it acceptable that a Commissioned Officer of the Marine Corps with the thorough background training Lt (b) (6) has had should either fail to recognize the situation or lack the judgement to at least request further briefing on the proper procedures for takeoff under these conditions.

Passing beyond his error in accepting this situation without question, the Board believes (b) (6) used poor judgement in utilizing improper procedures to attempt the takeoff. He had been through the D-130 training school; could reasonably be expected to know the proper procedures to be utilized in this emergency (i.e. feather had engine prior to brake release and commence roll with symmetrical power application bringing the number 4 engine up to full power only as possible to do so without undue loss of directional control) and had practiced many 3 engine touch and go landings as well as having made 3 engine landings with one prop feathered utilizing the techniques of symmetrical power application. Notwithstanding this, he attempted to take this airplane off with one engine developing partial power and the other three developing full takeoff power from the moment of brake release.

The Board can only assume that Lt (b) (6) errors in judgement were due to inexperience and failure to clearly recognize that although he is a Co-Pilot he nevertheless bears a responsibility for evaluating conditions which concern safe conduct of flight operations.

c. CREW FACTORS

Flight Engineer, SSgt (b) (6) - The Board believes that SSgt (b) (6) was remiss in not being more emphatic to Captain (b) (6) that he had no control of number one engine and in not asking whether (b) (6) desired to feather the engine. By his own admission (b) (6) had participated in 3 engine take-offs many times during his rather extensive career as a Flight Engineer and knew that a bad engine because its actions can't be accurately predicted, should be feathered. The Board does not want to suggest that Pilot's piloting techniques are always subject to Flight Engineer's question. On the other hand the trained and competent Flight Engineer is a valuable member of the crew with a significant contribution to make to the safety of flight operations and should be given and should assume some latitude in making his contribution.

SPECIAL HANDLING REQUIRED in accordance with Para 46, OPNAV INST P3750.6E

VNCR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

3. MAINTENANCE, SERVICING AND GROUND HANDLING PERSONNEL FACTORS - There are no facets of this accident situation which indicate any servicing or ground handling problems. However, the maintenance history of this airplane and in particular the number 1 propeller reveals the possibility of maintenance error as well as maintenance supervisory error (to be dealt with in next paragraph) and a failure on the part of the pilot to fully utilize the knowledge available to him concerning the number one engine and propeller on 802.

On 11 August 1965 the pilot of 802 experienced a loss of torque shortly after attaining VMC with a concurrently decreasing TIT and fuel flow [Enclosure (16)]. As the aircraft became airborne or shortly thereafter the torque decreased to a slightly negative value (approximately minus 800-1000 inch pounds), TIT stabilized at about 630° with normal fuel flow (for that TIT) and RPM was 104.8%. Mechanical governing had no effect on the RPM and throttle movement had no effect on any indicators. The pilot feathered number one propeller and returned to the field.

Part "B" of the yellow sheet for this flight contains the above discrepancies and the pilot circled the aircraft condition "Down" arrow. The lower section of Part "B" where corrective actions accomplished are listed contains the write up "A/C run on ground for 20 minutes with no apparent discrepancies" and, the aircraft was signed off for further flight.

Several persons familiar with the propeller system on this aircraft, including the Hamilton Standard Tech Rep, have been questioned as to whether the above discrepancy write up does or does not clearly point toward a propeller problem (rather than some other major component). The consensus was that there was strong evidence of a prop problem.

On the very next flight because of excessive and fluctuating gear box oil pressure (230 psi \pm 30 psi) the number 1 engine was changed but the propeller was not changed. Why was the prop problem not more highlighted, and the propeller not changed? No really definite answer is available. Answers to the Board's inquiries along this line lead it to believe that: (a) the subsequent flight with no propeller problem, (b) a probable tendency to mentally translate the engine change to an explanation for the prop problem and, (c) the maintenance section of the unit was split up as the unit was in the process of moving from MCAS Iwakuni to MCAF Futaba; all combined to result in no really adequate action on the discrepancy write up.

Moving forward maintenance-wise with 802 to 20 August (with only minor and insignificant gripes during the interim period) we find that on that date number 1 prop was written up because it "will not stay in synch". Corrective action taken was replacement of the Synchrophaser. On 21 August the number 1 prop was again written up for "cycling 395 to 400 frequencies in normal", indicating a RPM fluctuation of approximately 1%. Corrective action taken was again replacement of the Synchrophaser. Two faulty synchrophasers on successive flights to correct discrepancies on the same prop, and signed off by the same supervisor/inspector, would seem to indicate a signal to question further at that time as to whether the Synchrophaser is in fact the location of the malfunction.

On the same flight on 21 August the first takeoff attempt was aborted. During the takeoff run the aircraft commenced to swerve to the left, the pilot noticed an unusually high TIT (1000°-1020°) and the Flight Engineer noticed a reduction (2-3000 pounds) in torque. Neither saw the engine indications seen by the other. As the pilot noticed the high TIT he aborted. Subsequent to the abort the crew ran the number 1 engine up on the ground for several minutes and as everything checked normal, takeoff without incident was accomplished. The flight returned .8 of an hour later at which time only the

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

VNCR-152 AAR 1-654 involving EC-130F BSTD #49802 occurring 24 August 1965.
Pilot: (b)(6)

discrepancy concerning the prop as indicated by the fluctuating cycles of the A.C. generator, was written up. In other words the situation causing the abort was never written up. Instead, Flight Engineer, SSgt (b)(6) merely discussed the situation with SSgt (b)(6), the outbound Flight Engineer (with (b)(6) and then, verbally reported the problem to the prop shop MCO. During post-crash interviews of SSgt (b)(6) by the Board he indicated that on several legs of the journey of 802 from Putama until it crashed in Hong Kong the number 1 prop required corrective action (resynching, mechanical governing, etc.) to bring excessive RPM down to a normal operating range.

In summary, on 11 August the pilot of 802 had to feather number 1 prop immediately after takeoff due to loss of torque and prop overspeed and no corrective prop action was taken. On 20 August, due to a malfunction of number 1 prop the synchrophaser was changed; on 21 August a takeoff had to be aborted due to low torque and high TIT problems again on the same number 1 engine/prop. Without corrective action, other than a brief runup on the end of the runway, the pilot took 802 off and upon return the abort situation was not even written up. The only write up that did occur had, as it's result, another changed Synchrophaser. Note that this is the second synchrophaser change to correct the same malfunctioning prop on successive flights, a fact to which apparently the maintenance personnel who were aware of it attached no particular importance. And finally, 802 departs from Putama for Danang, Chu Lai, Bangkok, Hong Kong, etc., flying in the next 3 days about 8 separate flights of varying duration during at least 2 or 3 of which mechanical governing or slaving to another engine/prop was necessary to properly control the speed of the number 1 propeller.

In reviewing the above, the Board finds: (a) Evidence of poor procedures within the unit maintenance department in that no apparent attempt was made to analyze the prop problem clearly indicated on 11 August; no apparent importance was attached to the changing of the same component (Synchrophaser) on successive flights to correct the same malfunctioning prop a fact that should have been important if a proper trend analysis function is being performed within the maintenance section; (b) Evidence of poor judgement on the part of pilots who, after brief ground runups with no specific corrective action taken, elect to continue a flight during which they have already encountered a problem serious enough in one case to feather the engine and in the other case to abort a takeoff; (c) Evidence of the lack of proper procedure in the case of a Pilot/Flight Engineer team failing to write up a major discrepancy situation. This failure of course tends to prevent trend analysis entirely, and finally; (d) Evidence of poor judgement, in particular, on the parts of Captain (b)(6) for his decision, and SSgt (b)(6) for his lack of more positive action, at the time of commencing the final takeoff of 802 since both were aware of the problems encountered on the flight just prior to their taking 802 from Putama, this compounded by prop discrepancies encountered during their own later flights plus the final problem of prop overspeed, and low torque just prior to the finally attempted takeoff.

C. Material Failures or Malfunctions

It is the opinion of the Board that the propeller assembly, serial number 219256, drawing number H-7111C-2, was a contributing factor in the accident, in that it is believed to have been the primary cause of low power output on number one engine. The propeller assembly had been installed since new and had a total of 1624.8 operating hours. The fuel flow, RPM, and low torque indications reported by the crew, are all indications that the engine was performing properly for the situation, i.e., preventing further RPM overspeed by the fuel governor restricting engine fuel flow. The increase of blade angle that occurs during throttle application is directly controlled by the valve housing assembly serial #4953 P/N R 565359-PC2, a component part of the propeller assembly. If the pilot valve was binding or broken in such a fashion

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPMAT INST P3750.6E

VMGR-152 A&B 1-65A involving KC-130F BUONO 149802 occurring 24 August 1965
Pilot: (b) (6)

where it could not have responded to the requirement for an increased blade angle this component could have been the source of malfunctioning of the propeller assembly, thus preventing torque output on number one engine. However, since the number one propeller assembly, has not been recovered for analysis the Board's opinion remains only conjecture based on the facts we do know plus discussions with persons knowledgeable on the propeller assembly.

During the course of the investigation both the Flight Engineers stated a positive belief that the number one prop had gone into reverse thrust during the attempted takeoff and that this fact accounted for the loss of directional control. SSgt (b) based his belief on the fact that a similar incident had occurred on a flight that he was on with another pilot (not in 802) on a takeoff attempt at Chu Lai a few weeks earlier. We questioned the pilot on that flight who described two windmill engine start attempts aborted due to inability to maintain directional control (they were trying to get a windmill start as the starter wouldn't work). The pilot said he also believed the number one prop had gone into reverse. Sometime after the second windmill start attempt, the starter did work, number one engine/prop functioned normally, and the airplane was taken off, flown back to Danang and the following day flown to Futema, and we've not traced it further. Without commenting on the judgement of a pilot and Flight Engineer who would make a third takeoff attempt with a prop they, by their own admission, believed had gone into reverse thrust without positive action having been taken to place it there, the Board believes no such thing occurred or the aircraft would not have gone on to fly additional flights without incident.

After exhaustively questioning the Hamilton Standard Tech Rep concerning the propeller and all the safety features of the prop and the possibilities of Reverse Thrust occurring without positive actuation, the Board does not believe it occurred during the attempted takeoff of 802 in Hong Kong. In view of the conflicting reports as to the torque on number one engine on that takeoff attempt the possibility exists of a decaying torque during the takeoff run which would certainly tend to increase the drag and produce an increasingly difficult directional control problem. It appears that more emphasis needs to be given to the directional control problems associated with low torque/high RPM/asymmetrical power situations at low airspeeds. We believe some pilots are erroneously interpreting the high drag produced under these conditions to be reverse thrust.

D. Facilities

Facilities are not considered a factor.

E. NATOPS

1. There are two publications governing the operation of the KC-130 aircraft. The basic publication is the Pilot's Flight Manual which is complemented by the NATOPS Manual. When dealing with matters relating to Shore Based Procedures or Emergency Procedures the NATOPS Manual directs the reader to the applicable sections of the Pilot's Flight Manual. Therefore the following discussion will deal with information contained within both manuals but treated as though the two manuals are one and referred to collectively as NATOPS Procedures.

2. The Board believes this accident was the direct result of failure of the pilots to follow standard NATOPS Procedures.

3. NATOPS makes it clear that a 3 engine condition is an emergency situation and the Board has already indicated its beliefs concerning the Pilot's decision to takeoff in this case under such conditions. However, considering that an operational necessity could arise wherein a takeoff on 3 engines with

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

VMGR-152 AAR 1-65A involving KC-130F BUNQ 149802 occurring 24 August 1965
Pilot: (b) (6)

a load is a correct decision, the Board is satisfied that utilization of proper NATOPS procedures makes it entirely feasible and relatively safe. NATOPS makes it clear that in such a situation if the pilot goes to his charts with power available/gross weight/atmospheric conditions/runway condition information and ascertains that the takeoff is feasible, then feathers the malfunctioning engine and utilizes proper symmetrical power application techniques, he can anticipate a relatively safe takeoff. All of the pilots of this unit that the Board questioned showed adequate understanding of the above.

4. In the course of its NATOPS inquiries the Board finds that according to their flight jackets:

a. Captain (b) (6) had his last KC-130 evaluation flight check on 29 August 1963; there is no indication as to when he last had a written exam on the KC-130 or on NATOPS procedures.

b. Lieutenant (b) (6) had an evaluation flight check on 25 May 1965; his jacket contains no indication of when he may have had a NATOPS written exam. He had a written exam on the KC-130 sometime (the form is undated) while attached to VMGR-352 at El Toro.

5. Further NATOPS investigation indicates that:

a. The unit did not have a specifically designated NATOPS Officer.

b. Upon newly joining the unit, pilots jackets are reviewed only by the senior flight officer in the operations department.

c. The jackets of many pilots joining the unit have no indication as to when they had their last NATOPS written or flight exams and the unit had taken no steps to acquire this information. Enclosure (20) shows the status of NATOPS qualifications of the pilots of the unit according to the records of the unit as of 24 August 1965.

d. Upon joining the unit pilots are given a route familiarization flight check only, before being placed on the regular flight schedule. The unit has indicated its intent to use pilots birth dates as the basis upon which to schedule NATOPS checks.

e. The unit has no records of Flight Engineer NATOPS checks. The Flight Engineers themselves keep individual records and the Board was provided a compilation thereof by the Flight Engineers, which indicates that practically all of the Flight Engineers have undergone qualification checks since April 1965.

6. It is apparent that the pilots of 802 did not comply with NATOPS requirements during the flight on which 802 crashed; it is equally apparent that the unit is not complying with NATOPS requirements.

7. No changes to NATOPS appear necessary.

F. Supervisory Factors

Supervision at the unit level has been deficient in several respects. In view of the primary cause of the accident, probably the single most important such deficiency noted by the Board, was the Squadron's failure to comply with NATOPS requirements. By its failure to ensure timely NATOPS Standardization Checks it appears likely that the pilot of 802 may not have been reasonably freshly aware of proper NATOPS procedures particularly insofar as 3 engine takeoffs are concerned. While the Squadron records do not so indicate, the Board has been told that Captain (b) (6) had a NATOPS Standardization Check

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPMNAV INST P3750.6E

VMCR-152 AAR 1-65A involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

at Cherry Point in June of 1964. If this is true, then by compliance with NATOPS regulation he would have again been checked not later than June 1965, or about 2 months prior to the accident. A proper NATOPS check would have covered 3 engine takeoffs and perhaps with those procedures more recently brought to mind he would have been more aware of the dangers of non-adherence thereto. Failure to ensure NATOPS checks has not been limited to Captain (b) (6). See Enclosure (20). The unit commander as well as several other members of the unit have indicated that the flying commitments of the unit were too heavy to permit adequate training time to accomplish NATOPS checks. The Board agrees that training flights over and above the training accomplished on routine commitment flights is required as it is not sound to practice emergencies on such flights. However if the unit could not meet the requirements of NATOPS, the unit commander had a duty and a responsibility to make this fact known to higher headquarters in an effort to gain the necessary training time.

We believe the unit was also deficient in supervision of its maintenance effort during the period of its change of location from MCAS, Iwakuni to MCAF, Futaba. Our inquiries of several members of the maintenance department of the unit causes us to believe that no adequate system of trend analysis existed during the time that the maintenance department was split between the two locations. During that time aircraft were being worked on at both locations; yellow sheets were not apparently being centrally correlated on a carefully supervised basis and therefore proper trend analysis was not possible. When a squadron is ordered to move its location while simultaneously carrying out its usual commitments it is mandatory that it have a most carefully and precisely developed plan to ensure no degradation from normally observed standards.

We believe a deficiency has existed in this unit in another most important area, although one not as susceptible of clear definition as the above. It has to do with the overall state of mind of the unit as an entity. VMCR-152 reports that it has flown an average of approximately 1600 hours per month for the 6 months period March through August inclusive. During this period the average number of pilot crews available was 16 and so they averaged approximately 100 hours per month. Average time per available aircraft was approximately 130 hours per month. By any standard, this unit has been given a big job and, on the face of it, has done it well. However, during our many interviews, inquiries, etc., we have listened to many instances of poor rationalization and many instances where it appears that expediency has overweighed good judgement. In short, the sense of urgency of their tasks appears to have caused shortcutting of sound procedures and compromise of sensible safety standards. The responsibility to ensure the proper state of mind of each individual and the unit as a whole in order that safety is not sacrificed to expediency lies squarely on the shoulders of the Commanding Officer. The most assiduous command and supervisory attention is required in these circumstances. The Commander and his key staff officers in this respect have a time consuming and demanding job. During the last 3 months the Squadron Commander has averaged 95 hours flight time per month; the Safety Officer 91 hours; the Assistant Aircraft Maintenance Officer, 117 hours; the Aircraft Maintenance Control Officer 120 hours; the Maintenance Quality Control Officer, 110 hours. The Board does not intend to infer criticism of these individuals for the amount of flying reflected above nor does it render judgement as to the absolute necessity of such in any individual case. We do believe it necessary to caution that management responsibilities insofar as they may affect safety must not be relegated to a secondary role. The Unit Commander must never permit his unit to become so imbued with its desire to meet operational commitments that they fall into the trap of believing that safety standards can be overlooked. In fact he must ensure an understanding on the part of his unit that careful adherence to safety procedures developed under normal conditions is almost certain to produce the most efficient unit under conditions of stress. Or, in other words, standards must not be relaxed because of war condition deployments.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

VMGR-152 AAR 1-65A involving KC-130F BUHQ 149802 occurring 24 August 1965
Pilot: (b)(6)

One final comment on supervisory factors is considered appropriate. Until about 10 days prior to the accident VMGR-152 was a subordinate unit of Marine Wing Service Group-17, which in turn is a subordinate unit of the 1st Marine Aircraft Wing. Formal inspections plus staff visits by the appropriate staff officers from both the higher headquarters should have noted to some extent the above deficiencies. The Board is not located at the site of either of the headquarters mentioned and does not have available their records concerning the actions carried out along these lines. Therefore, it is not considered appropriate to comment further on this matter. It is assumed appropriate comments will be made in forwarding endorsements.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

VMGR-152 AAR 1-65A involving KC-130F BUHO 149802 occurring 24 August 1965
Pilot: (b) (6)

PART VIII - Conclusions

1. The Board concludes that the primary cause of this accident was error in pilot judgement on the part of the Aircraft Commander. His errors as determined by the Board are listed and discussed in Part VII.
2. The Board further concludes that the following were contributing factors in this accident:
 - a. Poor judgement and technique on the part of the Co-Pilot as previously discussed in Part VII above.
 - b. Poor judgement on the part of the Flight Engineer as already discussed in detail in Part VII above.
 - c. Material failure/malfunction as already discussed in Part VII.
 - d. Supervisory deficiencies as discussed above.
3. The Board further concludes that under the appropriate conditions and with utilization of proper NATOPS procedures, 3 engine takeoffs may be made with relative safety.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E

ORIGINAL

VMGR-152 AAR 1-65A involving KC-130F BUONO 149802 occurring 24 August 1965
Pilot: (b) (6)

PART IX - Recommendations

The Board recommends that:

- a. VMGR-152 immediately review its entire NATOPS situation and take steps to ensure compliance with all NATOPS requirements.
- b. VMGR-152 immediately review its maintenance organization, particularly the trend analysis function, to ensure that, by coordinated effort of all involved, discrepancies are not allowed to be written off without adequate explanation and that unsafe trends are dealt with in a timely fashion.
- c. That it be emphasized at each echelon of command that relaxation of normally high standards due to wartime deployment with less than desirable operating conditions, is intolerable and unsafe. It is emphasized that these conditions accentuate the requirement for the most careful and detailed command attention.
- d. That 3 engine takeoffs in KC-130 aircraft not be flatly prohibited, but rather that the conditions warranting same be carefully prescribed.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

ORIGINAL

ORIGINAL

VMGR-152 AAR 1-65 involving KC-130F BUNO 149802 occurring 24 August 1965
Pilot: (b) (6)

INDEX OF ENCLOSURES

- (1) MOR - (original only)
- (2) Statement of (b) (6)
- (3) Statement of
- (4) Statement of
- (5) Statement of
- (6) Recording of
- (7) Statement of
- (8) Statement of
- (9) Statement of
- (10) Statement of
- (11) Statement of
- (12) Statement of
- (13) Statement of
- (14) Statement of
- (15) Statement of
- (16) Statement of
- (17) Statement of
- (18) Statement of
- (19) Pilot Resume (Both)
- (20) NATOFS Letter
- (21) Copy of Flight Plan
- (22) Approximate Flight Path of KC 149802 (Photo)
- (23) Approximate Flight Path of KC 149802 (Diagram)
- (24 through 31) Photos

ORIGINAL

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66, OPNAVINST P3750.6E

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY:

THIS IS THE INVESTIGATION OF THE CRASH OF A KC 130 TYPE AIRCRAFT WHICH OCCURRED AT 1010 LOCAL TIME AT KAI TAK AIRPORT, HONG KONG B.C.C.. ABOARD THE AIRCRAFT WERE SIX CREW MEMBERS AND SIXTY-FIVE PASSENGERS. THIRTEEN OF THOSE ON BOARD SURVIVED THE CRASH, INCLUDING FOUR CREW MEMBERS, AND FIFTY-EIGHT PERISHED IMMEDIATELY; ONE SURVIVOR DIED OF INJURIES SEVEN DAYS AFTER THE CRASH.

(b) (5)

THE PRIMARY CAUSE OF THE ACCIDENT HAS BEEN ESTABLISHED AS PILOT ERROR, IN THAT THE TAKE-OFF OF A LOADED AIRCRAFT WAS ATTEMPTED WITH ONLY THREE OF THE FOUR ENGINES OPERATING PROPERLY. THE CONTRIBUTING CAUSE WAS A FAILURE OF THE #1 PROPELLER.

DISCUSSION:

WHILE SITTING IN AS A MEMBER OF THE AAR BOARD IT HAS BECOME INCREASINGLY EVIDENT THAT, WHILE THE PROCEDURE IN ITSELF IS NOT UNUSUAL, THREE ENGINE TAKE-OFFS REQUIRE A CERTAIN TECHNIQUE IF THEY ARE TO BE ACCOMPLISHED SAFELY. FURTHER, EXCEPT UNDER UNUSUAL CIRCUMSTANCES, SUCH A TAKE-OFF PROBABLY WOULD NOT BE ELECTED WITH A FULL LOAD.

IN THE CASE OF THE ACCIDENT UNDER CONSIDERATION, THE AVIATOR MEMBERS OF THE BOARD ARE OF THE OPINION THAT:

1. THERE WAS NO REQUIREMENT FOR THE AIRCRAFT TO TAKE OFF UNDER ANYTHING LESS THAN OPTIMUM CONDITIONS.
2. HAVING ELECTED TO TAKE OFF, A BRIEFING SHOULD HAVE BEEN GIVEN RELATIVE TO EMERGENCY PROCEDURES.
3. TAKE OFF PROCEDURES DEPARTED COMPLETELY FROM THOSE CONSIDERED STANDARD FOR THIS TYPE OF OPERATION.
4. WHEN IT BECAME APPARENT THAT A LOSS OF CONTROL WAS IMMINENT, ATTEMPTS TO ABORT WERE THWARTED BY THE AIRCRAFT COMMANDER.

CERTIFICATE

A supplementary report, pages 4, 4a and 4b, covering the deceased crewmembers and passengers will be submitted upon receipt of Autopsy Protocols from Clark Air Base, Philippine Islands.

SPECIAL HANDLING REQUESTED IN ACCORDANCE
WITH PARAGRAPH 66, OPERATING INSTRUCTIONS

HONG KONG INTERNATIONAL

RECLAMATION AREA

MAGNETIC VARIATION 1° 10' W (1964)

L.C.N. 108 EXCEPT SPECIFIED AREAS

RUNWAY 8150 BY 200 FT. NO GRADIENT, ELEVATION 15 FT AND

DETERMINATION OF LIGHTS NOT DRAWN TO SCALE

SWEERVED OFF
RUNWAY AT THIS
POINT (3800 FT)

WATER

1. LOCATION OF FINAL
IMPACT WITH WATER
RESTING PLACE.

2. INITIAL IMPACT
OF LEFT WING
WITH CEASANT
SEA WALL.

3. FLIGHT PATH
AFTER LEFT
OFF FROM
GRASS MEDIAN
CHISO BUVO
149802

SCALE IN FEET

WATER

ENCLOSURE (25)

Tape recording of Kai Tak Tower radio communications on 118.1 MC in connection with crash of KC-130 Bureau Number 149802 on 24 August 1965

Time of take-off: 1006:45 AM

Time of Crash: 1007:56 AM

Beginning 1st transmission local time.

1000:00 - Tower, Marine 49802 for taxi, over.

1000:03 - Marine 49802, Tower, cleared to holding point. There's one fighter aircraft taxiing out. Taxi behind him. Holding point runway 13. Surface wind calm. QNH 29.90 over.

1000:20 - 802, Roger.

1004:33 - 49802, Tower. Are you ready for take-off?

1004:36 - 802 is ready to go.

1004:38 - Roger. You are cleared to line up and ATC clears, clears Marine 49802 to Danang via Amber 8 to climb and maintain flight level one eight zero, over.

1004:48 - This is 802. Is cleared to Danang via Amber 8 to climb and maintain flight level one eight zero, over.

1004:53 - That is correct.

1005:08 - 49802, you are cleared for take-off.

1005:11 - 802. Roger, on the roll.

1005:46 - 802, cleared for take-off.

1005:47 - 802. Roger, on the roll.

1006:14 - BRAVO Flight Leader - One Seven Bravo, check fuel state.

1006:15 - Answer from One Seven Bravo garbled.

1006:45 - 802, rolling.

1006:46 - Roger.

1007:56 - Hello, you've got a crash there Hong Kong. Do you see it?

1008:00 - Yes, we have an aircraft emergency.

1008:03 - It's out in the water on the other side of the reclamation Kun Tong.

1008:07 - Yes, have it in sight.

1008:09 - Roger. Are we cleared to run in and join?

1008:27 - Are we cleared to run in and break?

1008:30 - Affirmative.

1008:54 - One Seven running in.

1008:57 - Roger, One Seven. Run in for runway One Three, please. I have crash vehicles on the runway at the moment. I'm trying to clear them.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E
Enclosure (4)

1009:03 - - - - garble - - - - and we'll go straight downwind One Seven.
1009:08 - That is correct.
1009:11 - Hunters, space yourself right.
1009:15 - The crash vehicles won't help very much. He's way off the runway
in the water there.
1009:19 - Yes, we understand that. Umm. I pressed the bells when I saw him
going left. I thought he might have finished on the runway.
1009:26 - Yeah. The whole thing has gone up now. It looks pretty poor.
1009:28 - Yes.
1009:31 - Just about 100 yards off the far shore. I would say they're at the
other end of the reclamation.
1009:38 - One Seven is downwind.
1009:40 - Roger, continue.

-2-

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

Enclosure (1)



FINAL RESTING PLACE OF BQ2 AT LOW TIDE.

Special Handling Required in accordance with Para 66, OPNAV INST P3750.68

ENCLOSURE (214



DEICTS FLIGHT PATH OF AIRCRAFT AS CONSTRUCTED FROM STATEMENTS. TIME IN FLIGHT APPROXIMATELY ONE MINUTE.

Special Handling Required in accordance with Para 66 GENAV INST 13750.6B

Enclosure (2)

Tape recording of Kai Tak Tower radio communications on 118.1 MC in connection with crash of KC-130 Bureau Number 149802 on 24 August 1965

Time of take-off: 1006:45 AM

Time of Crash: 1007:56 AM

Beginning 1st transmission local time.

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1008:30 - Affirmative.

1008:54 - One Seven running in.

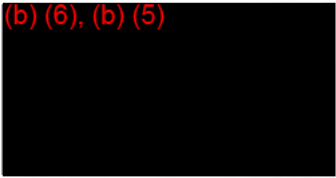
1008:57 - Roger, One Seven. Run in for runway One Three, please. I have crash vehicles on the runway at the moment. I'm trying to clear them.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6B

Enclosure (6)

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1009:08 - That is correct.
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in the water there.
1009:19 - Yes, we understand that. Umm. I pressed the bells when I saw him
going left. I thought he might have finished on the runway.
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1009:31 - Just about 100 yards off the far shore. I would say they're at the
other end of the reclamation.
1009:38 - One Seven is downwind.
1009:40 - Roger, continue.

(b) (6), (b) (5)



-2-

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

Enclosure (6)

From: Aircraft Maintenance Officer, VMGR-152
To: Senior member of Aircraft Accident Board: Case of KC-130F BuNo
149802 on 24 August 1965.

Subj: Operating history and other related information pertaining to
KC-130F BuNo 149802; Listing thereof

1. The following information is a compilation of pertinent discrepancies and corrective action taken during the thirty day period prior to the accident of the subject aircraft. All the information was extracted from the work order and work accomplishment records.

- 11 August 1965
 1. Manual pressure switch wired backwards.
 - a. Rewired switch. Works ok.
 2. No. 2 prop spinner anti-icing reads 10 amps.
 - a. Replaced contact rods, ran up aircraft checked ok.
 3. No. 3 prop would not go to complete feather.
 - a. Checked blade angle 92.5°, check feathering time 15 sec.
 4. Doppler drift 33° R error.
 - a. Aligned doppler drift control box, check good.
 5. Weak heading marker on radar.
 - a. Replaced nav scope, checks good.
 6. APN-22 no indication.
 - a. Replaced AM-291 and RT 160/APN-22, checks good with APN-66
 7. No. 2 ADF no audio, pops c/b from co-pilots position.
 - a. Replaced No. 2 R 101/ARJ-6 checks good.
 8. AFX-7 no gain, weak targets.
 - a. To be repaired at Futema. No gear available.
 9. ID-663 stuck on north.
 - a. Replaced ID-663/u, checks good
 10. Oil draining from no. 3 drain mast.
 - a. Oil tank overfilled, drained oil to proper level.
- 12 August 1965
 1. Gear box oil press tx no good
 - a. Replaced oil pressure transmitter.
- 12 August 1965
 1. No. 4 starter failed, pressure loss and prop stopped rotating.
 - a. Changed starter.
- 12 August 1965
 1. Replace VHF Receiver and loran.
 - a. Replaced ABC-84 VHF rec, replaced loran and indicator.
- 13 August 1965
 1. High oil pressure no. 1 gear box 280 psi.
 - a. Changed no. 1 engine

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

ENCLOSURE (18)

14 August 1965

1. Co-pilots VGI sticks and jumps.
 - a. Replaced co-pilots VGI indicator, checks good.
2. Right ground wire missing.
 - a. Replaced right hand ground wire.
3. Loran scope and control box missing.
 - a. Replaced missing loran, checks good.
4. Navigators no. 2 ADF-2 control switch has to be on in order for pilot to operate it.
 - a. Replaced co-pilots control box, checks good.

15 August 1965

1. Tacan and DME out.
 - a. Replaced tacan, checks good ch 78.
2. No radar repeater scope.
 - a. Replace when available, carry over.
3. Left forward urinal plugged up.
 - a. Replaced urinal with one from 149811.
4. No. 1 engine flux 14-5 cycles with master off. Mech gov steady. Tried re-index each time, no. 1 would go up. In mech govs no. 1 engine reads high cycles also - 102% + 403 cpm.
 - a. Ran up aircraft no. 1 engine in working ok.
Found auto tach in mech to read no. 1 - 99.9 no. 2 99.2 no. 3 99.5 and no. 4 99.9

20 August 1965

1. No. 1 Prop will not stay in sync - re-indexing no effect.
 - a. Replaced synchrophaser.
2. L.H. refueling tank solenoid circuit breaker popped.
 - a. Repaired bare wire behind spr panel.
3. Left landing light does not illuminate.
 - a. Replaced L.H. landing light and wiring.
4. No. 4 scavenge light came on.
 - a. Parts on order.
5. Aircraft pressurizes on deck at 2000' per min to 280 regardless of controller setting - manual ok.
 - a. Changed diaphragm in relay and cleaned unit.
6. Oxygen leak co-pilots side.
 - a. Tightened regulator, no sign of leak.
7. Bad pressurization leak at crew entrance door.
 - a. Adjusted latch to crew entrance door.
8. Both ground wires broken.
 - a. Replaced both ground wires.
9. Right IFR surge suppressor reads "0" psi.
 - a. Replaced surge suppressor sleeve, serviced to 95 psi.

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.68

ENCLOSURE (18)

10. Pilots radar repeater scope inoperative.

a. Carry over wo no. 1040.

11. No. 2 HF out.

a. Replaced no. 2 HF with an ARC-38A system.

12. Check GTC for blown duct.

a. Reconnected GTC air duct, checks good, no leaks.

13. No. 1 prop leaking.

a. Replaced small "O" ring inside sump plug.

14. No. 2 oil cooler leaking.

a. Oil leak from starter, changed garloc seal.

20 August 1965

1. Top and lower beacons out.

a. Replaced top rotating beacon light, repaired bottom rotating beacon light.

21 August 1965

1. No. 4 scavenge light came on.

a. Carry over (pump on order)

21 August 1965

1. No. 1 prop cycles 395 to 400 freq in normal, ok in mechanical.

a. Replaced synchrophaser.

2. Total time on aircraft since new is 3209.1.

3. Total time on engines since new is; no. 1 engine 2317.6, no. 2 engine 974.3, no. 3 engine 1561.7 and no. 4 engine 1551.6.

4. Total time on aircraft this tour is 2025.5.

5. Total time on engines since rework is; no. 1 engine 362.4, no. 2 engine 686.7, no. 3 engine 744.6, and no. 4 engine has never been reworked.

6. Total time on propellers since new is; no. 1 propeller 1624.6, no. 2 propeller 1832.8, no. 3 propeller 106.9, and no. 4 propeller 3741.9.

7. Total time on propellers since rework is; no. 1 propeller has never been reworked, no. 2 propeller 583.7, no. 3 propeller has never been reworked, and no. 4 propeller 2436.7.

8. From the readings as reported, high rpm, very low torque and fuel flow. It appears that the propeller blade angle never increased to a point where the low pitch stop could be engaged or to the range where a pitch lock could occur. As the throttle was moved forward to increase fuel flow there should have been at this time an increase in blade angle with a corresponding increase in torque. With the throttle increase rpm increased as stated

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

ENCLOSURE (8)

to approximately 105%. This is the governor setting inside the fuel control. Indicating that the fuel control was working properly. The increase of blade angle that occurs during throttle application is directly controlled by the valve housing. If the pilot valve were stuck or broken in such a position it could have not responded to the increase blade angle signal. It is the opinion of this officer that the described malfunction could very well have been caused by a malfunction in the valve housing assembly of the propeller control.

9. The following Aircraft Service Changes have not been incorporated: 36, 39, 47, 52, 56, 62, 64, 66, 69, and 70. The following NWETS Airframe bulletins also have not been incorporated; 29.

10. Aircraft collided with water. No airframe assemblies, accessories, or major components were salvageable due to damage upon impact, and exposure to salt water.

11. The total cost of aircraft including engines and propellers is estimated at 2.8 million dollars.

(b) (6)



SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST 3750.6E

ENC/NAVE (14)

VMGR-152 AAR 1-65A INVOLVING KC-130F BUREAU NUMBER 149602 OCCURRING 24 AUGUST 1965. PILOT: (b) (6)

RESUME OF PILOT EXPERIENCE: CAPTAIN (b) (6)

COMMAND ATTACHED	PERIOD ASSIGNED	MODEL ACFT	FLIGHT HOURS	OPERATIONAL PROFICIENCY
MAD, NABTC				
PCLA, FLA	1JUL60 - 10OCT60	T-28	92	INSTRUCTOR
MAD, NABTC				
CORPC	21OCT60 - 27MAR61	S2F	116	STUDENT
VMR-353	12APR61 - 30JUL62	R4Q	673	OPERATIONAL
HAMS-27	31JUL62 - 13FEB63	R4Q/C-119F	141	OPERATIONAL
VMGR-252	14FEB63 - 7DEC64	KC-130F	1054.9	OPERATIONAL
VMGR-152	25JAN65 - PRESENT	KC-130F	493.3	OPERATIONAL

RESUME OF PILOT EXPERIENCE: FIRST LIEUTENANT (b) (6)

	DESIGNATED NAVAL AVIATOR	T-34, T-28C, TF9J		
NABTC	11JAN62 - 1JUL63	F11A, TC45J	335.6	STUDENT
		TF9J	18.2	
		T1A	1.6	
HAMS-33	24AUG63 - 31JAN64	F8E	63.4 83.2	OPERATIONAL
		TF9J	17.6	
VMP(AW)-312	21FEB64 - 7DEC64	F8E	242.0 259.6	OPERATIONAL
VMGR-352	8DEC64 - 26FEB65	KC-130F	15	OPERATIONAL
HAMS-37	27FEB65 - 13APR65	T1A	27	OPERATIONAL
VMGR-352	14APR65 - 28JUN65	KC-130F	120	OPERATIONAL
VMGR-152	20JUL65 - PRESENT	KC-130F	149	OPERATIONAL

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPRAY INST 3750.6B

ENCLOSURE (19)

MARINE AERIAL REFUELER/TRANSPORT SQUADRON 152
1st Marine Aircraft Wing, FMF, Pacific
Fleet Post Office, San Francisco 96601

3/RDF:jpn
3700
12 September 1965

From: Commanding Officer
To: Senior Member, 1st Marine Aircraft Wing, Accident Board
Subj: NATOPS Report, as of 24 August 1965

AIRCRAFT COMMANDERS

	<u>DATE JOINED</u>	<u>OPEN BOOK</u>	<u>CLOSED BOOK</u>	<u>FLT CHECK</u>
LTCOL. (b) (6)	MAY65	---	---	---
MAJ. (b) (6)	JAN65	COMPLETED	---	---
MAJ. (b) (6)	DEC64	---	---	19JUL65
CAPT. (b) (6)	SEP64	---	---	---
CAPT. (b) (6)	SEP64	---	---	---
CAPT. (b) (6)	MAR65	COMPLETED	COMPLETED	21OCT64
CAPT. (b) (6)	JUL65	COMPLETED	COMPLETED	8APR65
CAPT. (b) (6)	JAN65	---	---	---
CAPT. (b) (6)	MAY65	---	---	8DEC64
CAPT. (b) (6)	NOV64	---	---	---
CAPT. (b) (6)	MAR65	---	---	---
CAPT. (b) (6)	MAY65	---	---	8DEC64
1STLT. (b) (6)	JAN65	---	---	---
1STLT. (b) (6)	NOV64	---	---	---
1STLT. (b) (6)	NOV63	---	---	---
1STLT. (b) (6)	SEP64	COMPLETED	COMPLETED	20NOV64
1STLT. (b) (6)	JAN65	COMPLETED	---	7DEC64

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST P3750.6E
ENCLOSURE (20)

	<u>DATE JOINED</u>	<u>OPEN BOOK</u>	<u>CLOSED BOOK</u>	<u>FLT CHECK</u>
1STLT. (b) (6)	MAR65	--	--	--
1STLT. (b) (6)	MAY65	--	--	19APR65
1STLT. (b) (6)	MAY65	--	--	--

CO PILOTS

CAPT. (b) (6)	JUL65	--	--	--
1STLT. (b) (6)	JUL65	--	--	--
1STLT. (b) (6)	JUL65	--	--	--
1STLT. (b) (6)	MAR65	--	--	--
1STLT. (b) (6)	JUL65	--	--	--
1STLT. (b) (6)	MAR65	--	--	--
1STLT. (b) (6)	MAR65	--	--	--
1STLT. (b) (6)	MAR65	COMPLETED	COMPLETED	28AUG64
1STLT. (b) (6)	MAR65	--	--	--
1STLT. (b) (6)	MAY65	--	--	--

Austin C. Fitzgerald
AUSTIN C. FITZGERALD

SPECIAL HANDLING REQUIRED in accordance with Para 66, OPNAV INST F3750.6E

ENCLOSURE (20)

HONG KONG AIR TRAFFIC CONTROL CENTRE

FLIGHT PLAN

[illegible]



DEPICTS FLIGHT PATH OF AIRCRAFT AS CONSTRUCTED FROM STATEMENTS. TIME IN FLIGHT APPROXIMATELY ONE MINUTE.

Special Handling Required in accordance with Para 66 OFNAV INST P3750.6B

Enclosure (2)

INTERNATIONAL

RECLAMATION
AREA

SEA WALL

WATER

2. LOCATION OF FINAL
IMPACT WITH WATER
RESTING PLACE.

150'

SEA WALL

2. INITIAL IMPACT
OF LEFT WING
WITH CEMENT
SEA WALL.

WATER

MAGNETIC VARIATION 1° 18' W (1964)

L.S. N. 100 EXCEPT SPECIFIED AREAS

RAILWAY 850 BY 200 FT. NO GRADIENT. ELEVATION 15 FT AHS

DIMENSION OF LIGHTS NOT DRAWN TO SCALE

1. FLIGHT PATH
AFTER LIFT
OFF FROM
GRASS MEDIAN
C-130 BLVD
159802

SCALE 1" = 100'

SWERVED OFF
RAILWAY AT THIS
POINT (3800 FT)

HONG KONG

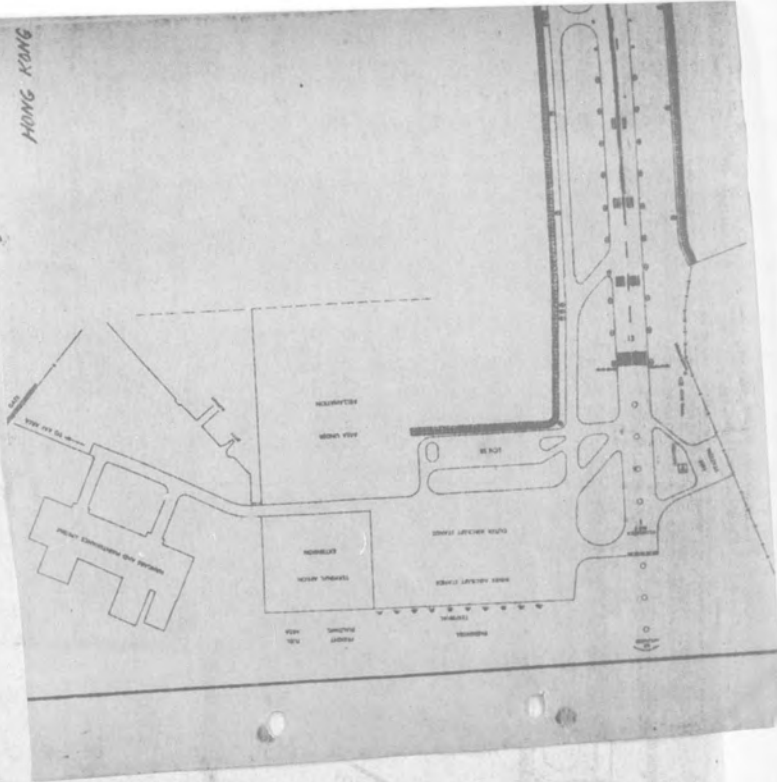


PHOTO ORIENTATION DRAWING (ENCLOSURE 25)



SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 66, OPNAVINST F3750.6E

ENCLOSURE (25A)



PAINT LINE DEPICTING PATH OF AIRCRAFT LEAVING RAMPWAY, TRAVELING 324 FEET.
IN GRASS ON LEFT PAIR GEAR. AIRCRAFT TRAVELING TOWARD VIEWER.
Special Handling Required in accordance with Para 66 OPNAV INST 3750.62

Enclosure (45)

SKID MARKS OF NOSE GEAR DEPICTING POSITIVE SKID TO THE LEFT EARLY IN THE
TAKE-OFF ROLL.

Special Handling Required in accordance with Para 66 OFNAV INST P3750.6B

Enclosure (2)





SKID MARKS OF NOSE GEAR DEPICTING EXCESSIVE SKIDDING TO THE LEFT.

Special Handling Required in accordance with Para 66 OPMV INST 3750.6E



HEAVY SKID MARKS DEPICTING TORQUE PRESSURE BEING APPLIED TO NOSE GEAR.
Special Handling Required in accordance with Para 66 OTNAV INST 3750.6B

Enclosure 28



MAIN LANDING GEAR MARKS DEPICTS PATH OF AIRCRAFT AS AIRCRAFT LEFT RUNWAY.
NOSE GEAR OFF DECK. RUNWAY LIGHTS MISNUMBERED. SHOULD BE NUMBER 19 & 20.

Special Handling Required in accordance with Para 66 OPNAV INST 3750.6E

Enclosure 29



SEAWALL WHERE LEFT WING TIP MADE INITIAL IMPACT (NOTE WHITE ANGULAR LINES)

Special Handling Required in accordance with Para 66 OFNAV INST P3750.6E

Enclosure (3)



NOSE GEAR TIRES SHOWING EXCESSIVE WEAR INDICATING AMOUNT OF CORRECTION
REQUIRED TO MAINTAIN DIRECTIONAL CONTROL.

Special Handling Required in accordance with Para 66 OPMV INST P3750.6E

Enclosure (31)

IE COMM NR 48/31

DGB198VRB835

PP RUCKDG

IE RUABPO 125 2431143

ZNY EEEEE

P 311143Z

FM MARAERIALRFLTRANSRON ONE FIVE TWO
TO RUCKDG/NAVAVNSAFECEN NORFOLK VA

BT

UNCLASS E F T O

ARR KC130F 149800

A. YOUR 301615Z

B. OPNAV INST3750.6E

C. USNLO HONG KONG 240300Z AUG

D. USNLO HONG KONG 260210Z AUG

1. INFO REQ REF A IAW PARA 28B REF B BEING PREPARED BY 1ST MAW BOARD.
REFS C AND D CONTAIN ONLY INFO AVAILABLE TO THIS CMD.

BT

48/31/65

Action Records

KC130 149802 VACR152 AAR 8-24-65 311143#

MESSAGE DRAFT
SNO 4462 (New 2/50)

CLASSIFICATION
UNCLASSIFIED

FROM NAVAL AVIATION
SAFETY CENTER

10/65

DEPT.

PROJ COO

ACTION

CO VMGR 152

PRECEDENCE	INT
Mail	
Night	
Message	
Routing	
X Priority	
Op Immed.	
Emer.	
Flash	

TEXT
UNCLAS EFTO

VMGR 152 AIRCRAFT ACCIDENT

1. MY 271715Z AUG TEXT QUOTED AS FOLLOWS:
QUOTE

VMGR 152 AIRCRAFT ACCIDENT
A. OPNAVINST 3750.6E
B. USNLO HONG KONG 240309Z

1. REQUEST INFO REQUIRED BY PARA 28B REF A ON ACDT REPORTED
BY REF B. UNQUOTE
2. INFO DESIRED FOR USAF C-130 SAFETY SYMPOSIUM, 31 AUG TO 1 SEP

REFERENCE MESSAGE

TRANSMIT BY
RADIO —

CLASS OF REP.

CWO

FOR COMD. OFFICE

DATE/TIME GROUP

301615Z

~~CONFIDENTIAL~~

NNNNDDGA986CDH306

RR RUCKDG

DE RUHADD 072W 3021400

ZNY CCCCC

R 291400Z

FM CG FMAV

TO RUHPO/FMFPAC

RUWDAF/COMNAVAIRPAC

RUCKDG/COMNAVAVNSAFECEN

RUECEN/CHVL

29 OCT 65 21 50z

NAV AVNA

1 NOV 1965

COPY NO. 7 OF 9

AAR Supp

← RUABPO/VNOR- ONE FIVE TWO

BT

~~CONFIDENTIAL~~

(CODE AAP60)

A. THIRD ENDORSEMENT ON VNOR-152 AAR 1-65 CONCERNING KC-130F BUNO 149602

1. PARA 7D OF REF (A). CORRECT FLIGHT TIMES ARE AS INDICATED ON PAGES 1 AND 1A OF 3750.1A EXCEPT PAGE 1 BLOCK 14 SECTION C SHOULD READ 284.
2. PARA 7E OF REF (A). FIRST LINE SHOULD READ "PAGE 1 SECTION C OPNAV FORM 3750.1A"
3. PARA 7C (2) OF REF (A). S OJLD READ "SECTION C BLOCK 14."

GP-4

BT

291400Z Oct.

~~CONFIDENTIAL~~

MESSAGE DRAFT
302 4462 (Rev 2/58)

CLASSIFICATION
UNCLASSIFIED

FROM NAVAL AVIATION
SAFETY CENTER

(b) (6)

965

51

(b) (6)

ACTION

CO VMGR 152

PRECEDENCE	
<input type="checkbox"/>	Mail
<input type="checkbox"/>	Flight
<input type="checkbox"/>	Message
<input checked="" type="checkbox"/>	Executive
<input type="checkbox"/>	Priority
<input type="checkbox"/>	Op. Instruct.
<input type="checkbox"/>	Emer.
<input type="checkbox"/>	Flash

INFO

CNO
COMNAVIAIRPAC
CGFMFPAC
CG FIRST MAW (ADV) (DANANG)
CG FIRST MAW (REAR) (IWAKUNI)
CG THIRD MAF/DANANG
USNLO HONG KONG

TEXT

UNCLAS

VMGR 152 AIRCRAFT ACCIDENT

A. OPNAVINST 3750.6E

B. USNLO HONG KONG 240309Z

1. REQUEST INFO REQUIRED BY PARA 28b REF A ON ACDT REPORTED
BY REF B.

REFERENCE MESSAGE

TRANSMIT BY RADIO ---	CLASS OF REF.	CNO	FOR C-101 OFFICE	DATE/TIME GROUP 271715Z
--------------------------	---------------	-----	------------------	----------------------------

KC 130/149802 VMGR 152 OAR 8-24-65

~~CONFIDENTIAL~~

DGB991CRE006
PP RUCKDG
DE RUHPG 4340 2421943
ZNY CCCCC
P 301943Z
FY CG FMFPAC
INFO RUCKDG/NAVAVNSAFECEN NORFOLK
C 260210Z

FM USNLO HONGKONG
TO CNO

called 31 AUG 1965 at

CDR NAVAL AVIATION SAFETY CENTER NORFOLK VA
INFO CHIEF BUVEPS WASHDC
CNC

Topic Rest / 96

CINCPACFLT

CG FMFPAC

CG 2ND MAW CHERRY POINT NC

CG 3RD MAW EL TORO CALIF

COMNAVAIRPAC SAN DIEGO CALIF

COMNAVAIRLANT NORFOLK VA

COMSEVENTHFLT

BUVEPSFLTREADYREPAC SAN DIEGO CALIF

BUVEPSREP LOCKNEED MARIETTA GEORGA

BUVEPSREPSALLISON INDIANAPOLIS IND

COMFAIRWESPAC

DIR ARMED FORCES INSTITUTE OF PATHOLOGY WASHDC

CG 1ST MAW ADV

CG 1ST MAW REAR

CG 3RD MAW

COMMSG-17

NLO DIRECTORATE AERO SPACE SAFETY NORTON AFB CALIF

VMGR-152 FUTA OGINAWA

BUVEPSREP HAMILTON STANDARD WINDSO LOCKS COGN

BT

~~CONFIDENTIAL~~ C-373

SUPPLEMENTARY MESSAGE REPORT OF AIRCRAFT ACCIDENT

A. OPNAVINST P3750.6E

B. USNLO HKONG 240900Z READDRESSAL OF

1. KC-130F, BUNG 149802, VMGR-152, ARR 1-654 AIRCRAFT CDR

SIVEL; CO-PILOT GJANSTON (LEFT SEAT).

2. SHWGXBN INTERNATIONAL TO DANANG, A.B. IFF CLEARANCE.

APPROXIMATELY ONE MINUTE.

3. PLFA. UNKNOWN DUE TO SALVAGE OPERATIONS BEFORE ARRIVAL.

4. TAKE-OFF. AIRCRAFT DEPARTED RUNWAY 13 HONGKONG INTERNATIONAL.

COPY NO. 7 OF 9

chy cause PE
4#0 Gng. 58

cl

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

PAGE 2 RUHPC 4340 ~~CONFIDENTIAL~~

5. AIRCRAFT CDR DECIDED TO TAKE-OFF WITH NUMBER 1 ENGINE DEVELOPING ONLY PARTIAL POWER (25-40 PERCENT). AIRCRAFT VEERED TO LEFT PRIOR TO LIFT OFF AND CONTINUED WEST SWERVE AFTER LIFT OFF. AIRCRAFT CDR ATTEMPTED TO REGAIN HEADING DUE TO BUILDINGS IN PATH. THE AIRCRAFT STALLED AND THE WEST WING IMPACTED SEA WALL RUPTURING A FUEL CELL CAUSING FIRE PRIOR VGO HITTING THE WATER.

6. SKY CONDITION: 2,000 FT BROKEN 5/10 COVERAGE VISIBILITY 12 MILES, WIND CALM, TEMP 86 DEGREES, DEW POINT 75 DEGREES.

7. LOW POWER NUMBER 1 ENGINE. CAUSE UNKNOWN.

8. YES, IF LOCATED.

9. NO

10. NONE

11. NONE

12. NEGLIGIBLE PROPERTY DAMAGE. POWER PLANTS DATA: POWER SECTION T-26A7 SERIAL NO. 102473, GEAR BOX SERIAL NO. 022890, PROPELLER SERIAL NO. 219596.

CLASS "A" INJURIES 31

CLASS "B" INJURIES 2 PASSENGER COMPARTMENT

CLASS "C" INJURIES 2 PASSENGER COMPARTMENT

21

PAGE 3 RUHPC 4340 ~~CONFIDENTIAL~~

CLASS "D" INJURIES 4 3 PASSENGER COMPARTMENT, 1 FLIGHT STATION

CLASS "E" INJURIES 1 FLIGHT STATION

CLASS "F" INJURIES 4 2

CLASS "F" INJURIES 4 2 PASSENGERS COMPARTMENT, 2 FLIGHT STATION

CLASS "U" INJURIES 27

SENIOR MEMBER 1ST MAW AIRCRAFT ACCIDENT BOARD SENDS.

GP-4

BT

~~CONFIDENTIAL~~

(WHEN FILLED IN)

LGHDGB717VRF815
PP RUCKDG
DE RUABPO 960 2380555
ZNY EEEEE

BT
UNCLAS E F T O SVC
A. SMS 941 2371710
B. SYS 858 2371822
1. H/W ZDK REF A.
DE RUABPO 941 2371710
ZNY EEEEE

BT
UNCLAS E F T O SVC
A. ZUI RUCKDG 600 2370309
1. ZDK RUABPO 901 241330Z
DE RUABPO 901 2361330
ZNY EEEE
P 241330Z

FM VMGR ONE FIVE TWO
INFO RUECM/BUFERS
RUCKDA/COMNAVAIRLANT
RUECM/CMC
RUAUBAB/CG FMAW REAR
RUMFUAQ/CG FMAW ADV
RUHFG/CG FMFPAC
ZEN/MCAF FUTEMA
RUCKDG/COMNAVAIRNSAFETYCEN

RUAUBUL/COMSEVENTHFLEET
RUECW/CNO

RUWDAF/COMNAVAIRPAC
RUAUDA/COMFAIRWESTPAC
RUHLK/CINCPACFLT
RUCKDG/CHNAVMAI

→ RUEPMR/DIR ARMED FORCES INSTITUTE OF PATHOLOGY

RUWDAF/BUVEPSFLTRDYREPAC
RUECM/BUVEPS

RUABGL/CG I MAC FWD
RUMFUAQ/CG III MAG
RUMFUAQ/CG THIRD MARDIV
BT

UNCLAS E F T O
CMC PASS TO CODE AAP
BUVEPS PASS TO CODE C-113
A. USAIRLNO HONG KONG 240225Z
B. USAIRLNO HONG KONG 240343Z
C. USAIRLNO HONG KONG 240442Z

1. REFS A, B, C ARE QUOTED FOR INFO.
2. UNCLAS E F T O - 1077 AUG 65. APEX BEELINE. THIS IS INTERIM
RPT. KC 130 NUMBER 9802 BASED OKINAWA EXPLODED MID-AIR APP LOCAL
OFF HONG KONG INTERIM OF THIRTEEN SURVIVORS THUS FAR.
BT

KE-130 149802 VMGR 152 AAR 8-24-65

SAFECEM

20 AUG 65 07 00Z

MESSAGE DRAFT
440 4452 (Rev 2/50)

FROM: NAVAL AVIATION
SAFETY CENTER
ACTION: USNLO HONG KONG
STATION SHIP HONG KONG

(b) (6)

1965

DEPT.
OOD

CLASSIFICATION

(b) (6)

PRECEDENCE	
Mail	
High	
Message	
Radio	
Priority	
Cp Immed.	
Exec.	
Flash	

INFO: CMC
COM: CMC
SUBJ: CMC
C1st MAW (ADV)/(DANANG)
C2 3rd MAP/DANANG
C3 1st MAP (PEARL HARBOR)
C4 FMFPAC/HAWAII
BUNEPSREP HAWAII
DIRECTORATE OF FLIGHT SAFETY, WORTON, AFB
APR INDIANAPOLIS

TEXT
UNCLAS

KC-130 BIRD 149802 ACCIDENT

1. NAVAVSAFEEN INVESTIGATION OF KC-130 BIRD 149802 ACCIDENT. REQUEST AVAILABLE TRANSPORTATION TO CONDUCT REQ TRANSPORTATION AND HOTEL RESERVATIONS.

(b) (6)

(b) (6)

REFERENCE MESSAGE

OF
AAR

CLASS OF REF.	CNO	DATE/PLACE/CLASS
C 130 149802	157MAN	240710 Z
		8-24-65

AAR Supp

NNNN

SAFCEN DE' COMM NR 052/24

AODGA053WJ175

RR RUCKDC

ZNY EEEEE ZOV RUCKCR

ZY-4

PP RUCKC

ZNY EEEEE ZFD RUAUCS

CSB206ZCDBA533

ZCDBA533

PP RUMPG RUMGCR RUMFUAQ RUCKC RUMJDH

DE RUAUDB 050 2360641

ZNY EEEEE

P 240629Z

FM CG FMAU REAR

TO RUMPG/CG FMFPAC

RUMGCR/CG III MAF

RUMFUAQ/CG FMAU ADV

RUCKC/ASC NORVA

RUMJDH/USNLO HONGKONG

BT

UNCLAS E F T O

MARINE KC-130 CRASH

1. USNLO HONGKONG 240309Z HAS BEEN READDRESSED TO CMC, COMSEVEN-
THFLT, COMNAVAIRPAC, COMFAIRWESTPAC, CG SECOND MAF AND CG THIRD
MAF FOR INFO.

BT

KC/30

ACTION RECORDS

224402921

VMGR-152
is depending on status
for info situation

FMF Pac
A/A-58

(Aug) T.O.
trans.
P.F.

39/24/68

AAR

SAFEEN DE COMH HRCB 24
IGBS 03VRC459

ZZ 0300Z
DE RUMJDN OSA 240333
ZNY EEEEE
ZZ 240309Z

FM USNLO HONGKONG
TO RUMSAG/CG 1ST MAW (ADN)/DANANG
RMSAG/CG 3RD MAF/DANANG
TUAUBAD/CG 1ST MAW (CREAR)/TRAKONT
RUMPCR/CG FMF PAC/HAWAII
RUMKMG/NAVYAL AVIATION SAFETY CENTER, NORFOLK, VIRGINIA

BT
UNCLASSIFIED EFTO UX-1076
MARINE KC-130 BU NO 149002, PILOT (b)(6) CRASHED ON IMPACT.
IN WATER APPROX TWO MILES SOUTHEAST OF HONGKONG KAI TAK AIRPORT AT
APPROX 241010 LOCAL TIME. HAVE REPORT UNCONFIRMED ON NINE SUR-
VIVORS, OF 59 PASSENGERS PLUS SIX CREW ON BOARD. EYE WITNESSES
REPORT AIRCRAFT VEERED LEFT AFTER 3000 FEET OF ROLL, BECAME
AIR BORNE, BANKED LEFT AND IMPACTED ABOUT NINETY DEGREES LEFT
DING DOWN IN WATER NEAR KWUN TUNG RECLAMATION AREA. USNLO
HANDLING MATTERS LOCALLY. COL (b)(6) USMC CAN BE CONTACTED
THROUGH USNLO HONGKONG. HE IS STAYING AT ASTOR HOTEL, KOWLOON,
COLONEL (b) SENDS.
BT

508241/1

240309Z